

The Business-to- Business Electronic Catalog Market

Status and Directions

**EDI/Electronic Commerce
Program**

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Introduction

A

Background

Citicorp Services Inc. is exploring many new avenues for providing banking/finance related services in the emerging electronic commerce environment. One area it has identified is in the area of commercial credit. In traditional transactions between corporations, the seller party typically extends credit to the buyer. It allows the buyer not to pay it until thirty or more days after it has shipped the goods. In an electronic environment, where buying is conducted over networks and where buyers browse electronic catalogs, extending credit to buyers is not an automatic gesture on the part of the seller. The anonymous relationship between the buyer and seller in an electronic environment precludes credit. (This is assuming that the buying company is not using a credit card, which is happening as well.). Business development strategists at Citicorp Services Inc. are wondering if there is a market opportunity in providing a credit-extension service to electronic buyers and sellers. Citicorp wants an overview of the providers of electronic catalog and related buying services. It has asked INPUT to identify players, outline the structure of the catalog industry, and make suggestions as to who might be interested in such a credit extension service. Citicorp is also interested in surveying some of the leading catalog providers and determining the extent of their interest, how they see the market for electronic catalog buying evolve over the next five years, and other issues. Citicorp is interested only in corporate-to-corporate buying that does not use credit cards nor uses mainstream EDI/EFT mechanisms to settle payments.

B

Objectives of this Study

Create a target list of catalog publishers/sources that will have the potential need for commercial credit services.

Assess and size the total sum of corporate-to-corporate business being conducted via catalog sales.

Assess the trends, issues, and directions of electronic catalog publishing.

C

Scope of this Study

The scope of Citicorp's interest consists of three components:

Find catalog providers. They may include: distributors, manufacturers, publishers, telephone companies, trade associations, service bureaus/providers,....

Sketch out the structure of the electronic catalog marketplace. Who are the players, what are the vertical markets, what are the issues that are impacting this industry (technology: how easy to use catalogs, pictures, parametric data interfaces; and competitive: how will the industry ultimately be structured, a service bureau, a large manufacturer as the key supplier of catalogs?)

Survey the catalog providers. Find out where they think the market is going, where the industry is evolving to. Do they see credit services as a viable value added service? Are electronic catalogs a way to replace distributors and a way to expand into new marketplaces? How soon will a significant portion of business be done over electronic catalogs. Will catalog platform providers be simply a clearinghouse for data, or do they get a piece of the action of the trade. How much should credit services cost (3% like credit cards). How should catalog services be priced (what should the finder's fee be?)

These three components can be delivered in two phases of research:

Phase 1 will include numbers one and two from above. Phase 2 will include number three.

D

Methodology

Phase 1 methodology:

INPUT will compile a directory of approximately 100 catalog publishers who are the most likely candidates to provide (or are already providing) an electronic service. This directory will include contact names, industry served. INPUT will find this information by surveying trade associations, various distributor groups, large catalog publishing companies and other sources deemed appropriate.

INPUT will classify the catalog publishers in relation to the overall economy, indicating the industry sectors and distribution channels each serve and, to the extent possible, how much dollar trade the catalogs are responsible for. Data for this portion of analysis will rely on Department of Commerce and other government sources.

In addition to the above, INPUT will identify and interview two or three providers of electronic catalogs. These providers are to be geographically located in the San Francisco Bay area. A Citicorp representative will approve the selection of the catalog providers.

Phase 1 results will be presented in a report.

E

Definitions

The following definitions are key to discussing the business-to-business electronic catalog industry.

Business-to-business merchandise catalog:

- A catalog used to market and/or sell the merchandise of a business (the supplier) to another business (the buyer). Distinct from a consumer catalog, which sells from a business to a consumer. Spiegel, Eddie Bauer, L.L. Bean are examples of consumer catalogs. This report focuses exclusively on business-to-business catalogs.

Business-to-business electronic catalog:

- A business-to-business catalog that, instead of having the form of a printed paper booklet, is placed in electronic form, typically via an online database or a CD-ROM (compact disc, read-only memory) diskette.

Multi-vendor catalog:

- A catalog that lists the products of several (often thousands of) vendors. Examples of multi-vendor catalogs are McGraw-Hill's Sweet's Catalog (of building materials). In a business-to-business scenario, it will usually be distributors that will provide multi-vendor catalogs.

Single-vendor catalog:

- A catalog that lists the products of only one vendor. Digital Equipment's DEC Direct is an example. The catalog lists only Digital products. In a business-to-business scenario, it will usually be manufacturers that will provide single-vendor catalogs.



Executive Overview

The use of an electronic catalog for business-to-business sales of merchandise (i.e. non consumer sales) is a very new sales channel. There are no standard ways yet established for using or of producing electronic catalogs. There are several uses of electronic catalogs (procurement, information gathering), several formats (diskette, CD-ROM, online), several varieties (manufacturer/single-vendor, distributor/multi-vendor), and several kinds of service provider who will make an electronic catalog (some coming from the traditional catalog/direct marketing industry, others coming from the information technology industry, and even others).

As with any newly emerging industry, the upside opportunity is to be an early entrant and capture dominant market share. The downside risk is to lose invested moneys because the market either fails to materialize or emerges in an unanticipated form.

Merchandise Sales Through Electronic Catalogs

Approximately \$60 billion of merchandise was ordered electronically from one business by another in 1992. This includes EDI ordering without an actually existing electronic catalog. Approximately \$30 billion of business-to-business sales was ordered through traditional -- mostly printed -- catalogs. The amount sold through actually existing electronic catalogs could be anywhere from \$10 to \$40 billion.

Assuming \$40 billion of business-to-business merchandise sales were transacted with the help of an electronic catalog, this represents slightly more than one percent of total business-to-business sales in the U.S., which is \$3.1 trillion.

In other words, there is a lot of growth potential for electronic catalogs from the standpoint of being one kind of sales channel.

The number of business-to-business print catalogs (separate titles) is estimated to be approximately 6,000. The number of business-to-business electronic catalogs is in the low hundreds.

The number of business-to-business electronic catalogs is growing. It is important to note, however, that even as the number of electronic catalogs grow, the share of business-to-business sales that they generate will most likely grow at a slower rate. A remote chance is that the share of sales (vis a vis other sales channels) may never become significant. The reason is that many catalogs generate no sales whatsoever: they are strictly used for information gathering purposes.

Electronic Catalogs in the Sales Process

Electronic catalogs are often (perhaps, most often) not used for making purchases. They are frequently used for information gathering purposes only. In the engineering industries (semiconductors, electronics, building materials), most electronic catalogs are used by engineers to obtain product information and have no ordering capability.

Even when an electronic catalog is used by a buyer to create a purchase-order, the buyer had previously interfaced with a sales representative of the selling company. Electronic catalogs are typically an adjunct to existing sales and marketing procedures. They are often promoted as an extra service to customers.

Industries Most Amenable to Electronic Catalogs

Industries where electronic catalogs exist or will shortly be implemented include:

General Business Supplies (where the buyer is a business and the seller is a distributor). These include office and stationery supplies and computer software and equipment.

Retail (where the buyer is a retailer and seller is either a distributor or a manufacturer). These include books and magazine subscriptions, shoes, sporting goods, music products (CDs, tapes), auto parts, marine hardware (including boat brokerage)

Manufacturing (where the buyer is a manufacturer or service provider and the seller is a manufacturer or distributor), graphics, printing and paper supplies, semiconductors and electronic components, pharmaceuticals and medical supplies, construction materials and hardware accessories, airplane

parts and supplies, electric motors, food service equipment, industrial machinery.

Infrastructure Requirements of Electronic Catalogs

The infrastructure is in place for widespread use of electronic catalogs by the business community. Even the smallest businesses now have the minimum computing equipment required to access an electronic catalog. Also, the needed critical mass exists of electronic catalog service providers and technologies.

Online databases and CD-ROM/floppy diskettes are the two alternative delivery modes for electronic catalogs. Each has compelling advantages for use. CD-ROM/floppy diskettes will continue to be a viable catalog medium through the nineties and will fall off in use, probably, only until bandwidth on telecommunications lines is very cheap.

Electronic Catalog Producers

There are three kinds of companies that produce electronic catalogs:

- (1) Manufacturers and distributors who sell products via the catalogs. Such companies include Baker & Taylor Books, Digital Equipment Corporation, W.W. Grainger, Wilco.
- (2) Traditional, print catalog producers. Such companies include R.R. Donnelley, Cahners Publishing, McGraw-Hill and others.
- (3) New companies. These are typically established information technology vendors (such as GE Information Services, Triad Systems Corporation, QRS Quick Response Services) and start-up ventures (such as Vertical Technologies, Distribution Sciences Corporation, and Automated Catalog Services).

There are a variety of ways to create an electronic catalog. Some electronic catalog producers are simply contractors who produce a catalog for a fee (similar to a printer that prints a paper catalog). Others produce the catalog and sell the use of the catalog to merchandise buyers and sellers.

Of those catalog producers who sell the use of the catalog, the sales fee is based on a flat service fee. In this study, we came across no catalog pricing schedule where a percentage of the sale was given to the catalog producer.

Recommendations

While now ahead of its time, Citicorp's service concept will most likely come into some need. Electronic catalog usage will come to pervade many industries by the end of the decade. Citicorp should proceed in finding partners.

The following are recommendations concerning partner selection.

- Citicorp should meet with catalog producers who are willing to discuss the concept (see below and appendix A). This will give Citicorp officials a more immediate insight into the dynamics of electronic catalogs.
- Because the industry is so new, perhaps the most stable partners are the manufacturers and distributors that sell their products through electronic catalogs. However, offering a credit service to these companies may be the equivalent of offering factoring services.
- The traditional catalog producers may not yet have a need for Citicorp's proposed service. The ones who are venturing into the electronic catalog area (R.R. Donnelley, McGraw-Hill/Sweets) are generally producing catalogs without ordering capabilities.
- The new players to the catalog industry offer Citicorp the highest risk/reward. Within this group, the best partners will be the established information technology service providers such as GE Information Services, Motorola, Sterling Software, QRS Quick Response Services, IBM/Advantis, and Triad Systems Corporation.
- The start up ventures playing the electronic catalog market are generally selling electronic catalog mastering services. Nevertheless, these companies may be worth meeting with as they could provide valuable insight.



Catalog Market Size and Segments

Key points:

- Traditional catalogs (consumer and business) generated approximately \$52 billion in merchandise sales last year and the figure is growing at 7% per year.
- Traditional business to business catalogs (including some electronic) generated approximately \$30 billion.
- Electronically-ordered merchandise in business-to-business transactions accounted for approximately \$60 billion.
- Total wholesale sales in the U.S. (a proxy for total business-to-business sales in the U.S.) was \$3.1 trillion in 1992.

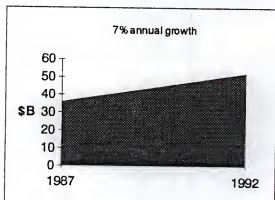
A

Merchandise Sales Volumes of Print Catalogs

According to the Direct Marketing Association, sales of merchandise through print catalogs (catalogs printed on paper) was approximately \$52 billion in 1992 and has been growing about 7% per year for the past five years. This counts consumer sales and business-to-business merchandise sales.

Exhibit III-1 shows the growth in sales of merchandise through print catalogs.

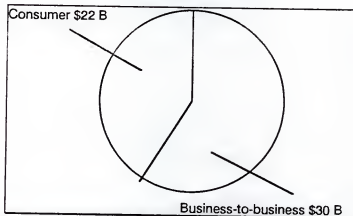
EXHIBIT III-1

Sales of Merchandise through Print Catalogs

Sales through consumer print catalogs totalled \$22 billion in 1992. Sales through business-to-business print catalogs totalled \$30 billion in 1992.

The respective shares of these two categories of direct sales is shown in exhibit III-2.

EXHIBIT III-2

Merchandise Sales Through Traditional Catalogs

Source: Direct Marketing Association, Catalog Age magazine.

There are approximately 10,000 consumer catalog titles and approximately 6,000 business-to-business titles.

A closely allied category of direct sales -- television shopping -- totalled \$2 billion by comparison.

B**Business-to-Business Catalog Market**

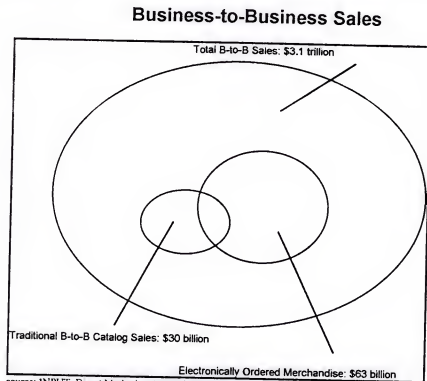
As noted in Chapter I, the volume of sales conducted through business-to-business catalogs is more difficult to quantify than consumer catalogs because every business maintains a catalog, in one form or another, of its product line. All business-to-business sales, therefore, could conceivably be considered amount of business generated by B-to-B catalogs.

There are three possible quantifications of the dollar sales volume among businesses based on catalogs. They are:

- the total business-to-business sales volume
- the business-to-business sales volume resulting from traditional catalogs
- the business-to-business sales volume stemming from electronic ordering that can be identified by adding up several of the leading electronic catalog providers

Exhibit III-3 shows the relationship between these three measurements.

EXHIBIT III- 3



source: INPUT, Direct Marketing Assoc., Dept. of Commerce

These three measurements are described in greater detail in the following sections.

At this point, note that the overlap between traditional B-to-B sales and electronically ordered merchandise is occurring with catalogs such as Digital Equipment Corporation's DEC Direct and WW Grainger's electronic buying service. Sales volumes for these electronic catalogs are included in the Direct Marketing Association's estimate of the traditional B-to-B catalog sales.

1. Total Business-to-Business Sales Volume

Total business-to-business sales in the U.S., as indicated by wholesale sales, was approximately \$3.1 trillion in raw materials and manufactured products in 1992 (according to the U.S. Department of Commerce, U.S. Industrial Outlook 1993).

Key segments of the wholesale sector and their respective business-to-business sales volumes are shown in exhibit III-4.

EXHIBIT III- 4

Merchant Wholesale Sales Leading Sectors

Sector	1992 Sales (\$billions)
Groceries	264
Machinery and Equipment	164
Motor Vehicles	154
Communications Equipment	129
Miscellaneous Non-Durables	129
Petroleum	124
Electrical Goods	117
Farm Materials	116
Miscellaneous Durables	112
Metals and Minerals	76
Apparel	65
Other	1,650
TOTAL	3,100

Source: Department of Commerce, *U.S. Industrial Outlook 1993*

These gross sales figures for business-to-business transactions could be considered the "upper limit" to the volume of business that could be conducted through catalogs.

2. Total B-to-B Catalog Sales Volume through Traditional Catalogs

According to catalog industry sources:

- Merchandise sales volumes resulting from print business-to-business catalogs was approximately \$30 billion in 1992.
- Approximately 6,000 B-to-B catalog titles exist

Industry sources contacted for this data were: Direct Marketing Association, Catalog Age magazine, Information Authorities (an industry research service), and Greyhouse Publishing's Directory of Business-to-Business Publishing. (See chapter V, section C, subsection 6 for contact information regarding these sources.)

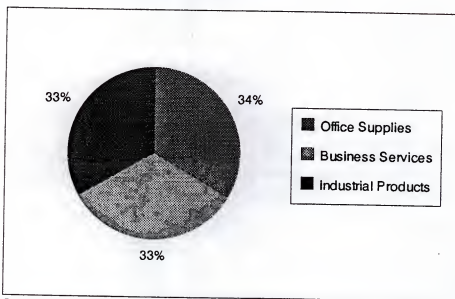
Business-to-business catalogs include:

- multi-vendor catalogs (electronic and paper)
- single-vendor catalogs (electronic and paper)

A multi-vendor catalog is one where products of several manufacturers are listed. A single-vendor catalog is a catalog where all products are those of one manufacturer.

The major segments of business-to-business catalog sales are shown in exhibit III-5.

EXHIBIT III-5

**Segments of B-to-B Print Catalog Market
by Sales Volume**

Source: Information Authorities, Direct Marketing Association

Office supplies include computer software and hardware products, office furniture, stationery and office supplies.

Business services include business information publications, seminar and educational courses, subscription services, mailing lists, courier and transportation services.

Industrial products include all kinds of intermediary products: machinery, instruments, medical supplies, raw materials, etc.

3. Merchandise Sales Volumes from Electronic B-to-B Catalogs

Business-to-business sales volumes generated from electronic catalogs is estimated to be approximately \$60 billion. This was arrived at by identifying the leading providers of electronic catalogs and estimating how much merchandise sales those catalogs led to.

In some cases (Digital Equipment Corporation, IBM Direct, Defense Logistics Agency, McKesson), these figures are publically disclosed. In most other cases, estimates were made.

More precise sales figures are available from those providers of catalogs where the catalog is an essential sales tool to their business. This is the case for single-vendor electronic catalog providers such as IBM and Digital and multi-vendor catalog providers -- almost always distributors -- such as McKesson or W.W. Grainger.

Exhibit III-5 lists leading providers of electronic catalogs and the total sales volumes of merchandise.

The volumes shown represent sales generated by electronic catalogs. The catalogs can take many forms. They include an online listing of products maintained by the supplier that the customer dials into. They include online databases that are maintained by third-parties that buyers dial into. They also include CD-ROM or diskette delivered catalogs.

EXHIBIT III-5

Merchandise Sales Volumes of B-to-B Electronic Catalogs

Provider Name	Annualized Catalog SalesVol (\$millions)
MultiVendor Providers	
Baker&Taylor	700
WW Grainger	500
McKesson	7000
Baxter	5000
Triad Systems Corp	10000
Pubnet	100
Automated Cat Services	100
INFO Enterprises	0
ViewPoint	0
Distribution Sciences	10
AutoInfo	2000
GEIS-shoes	2000
McGraw-Hill/Sweets	0
Airinc	1000
AcuSport	25
DOD/DLA	670
DOD/ITABE	1000
GSA	2000
Other	20000
SUBTOTAL	52105
SingleVendor Providers	
Digital Equipment Corp	1800
Kodak	1000
IBM Direct	400
Other	8000
SUBTOTAL	11200
Grand Total	63305

a. Number of Electronic Business-to-Business Catalog Titles

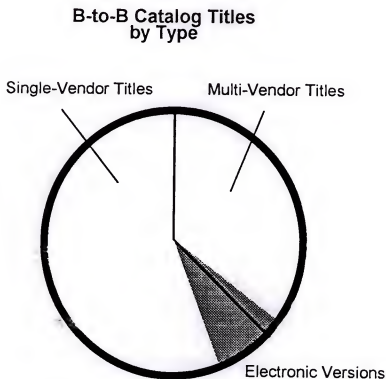
Out of the approximately 6,000 b-to-b catalog titles, INPUT estimates that there approximately 200-300 that are electronic, either delivered by CD-ROM or online. Two-thirds of the electronic catalog titles are single-

vendor catalogs, the other third are multi-vendor. They are constructed by a manufacturer as a sales tool.

Electronic catalogs are of both types: multi- and single-vendor. INPUT estimates that there are twice as many single-vendor electronic catalog titles as there are multi-vendor titles.

The proportions of the electronic catalog titles by type (single- vs. multi-vendor) and whether they are electronic or paper are shown in exhibit III-5.

EXHIBIT III-5



note: electronic version portion is exaggerated

This exhibit indicates that, typically, an electronic catalog will be produced by a manufacturer to list its products for its customers.

Very few B-to-B electronic catalogs (100 or less) list the products of several vendors.

Of the electronic catalogs that have ordering capability (via EDI or some similar network means), most again will be the single-vendor variety (such

as Digital's DEC Direct). Very few multi-vendor catalogs have ordering capability. The reasons for this are outlined in the next chapter.

b. Leading Segments of Electronic Business-to-Business Catalogs

Based on a survey of current electronic catalogs, the survey of 90+ distributor associations and interviews with electronic catalog providers, the following segments are the most notable areas using or about to use electronic catalogs.

i. General Business Supplies

Buyer: business

Seller: distributor

- Office and stationery supplies
- Computer software and equipment.
 - Notable in this segment are CD-ROM software catalogs where the product itself (computer software) is delivered on the CD-ROM. Buyers can test drive the software before buying. If they buy, they call the software vendor, make a credit card purchase, and the vendor gives them a password that will allow the buyer to download and officially register the software.

ii. Retail

Buyer: retailer

Seller: distributor, manufacturer

- Books and magazine subscriptions.
- Shoes
- Sporting goods
- Music products (CDs, tapes)
- Auto parts
- Marine hardware (including boat brokerage)

*iii. Manufacturing**Buyer: manufacturer, service provider**Seller: manufacturer, distributor*

- Graphics, printing and paper supplies
- Semiconductors and electronic components
- Pharmaceuticals and medical supplies
- Construction materials and hardware accessories
- Airplane parts and supplies
- Electric motors
- Food service equipment
- Industrial machinery

c. Bulletin Boards

A related area to electronic catalogs are bulletin boards that list items for sale or wanted. The former kind (items for sale) are at this time principally consumer-to-consumer type bulletin boards informally maintained over such networks as the INTERNET.

The latter, items wanted, is more of a real business opportunity. The Federal Government is putting together a number of bulletin boards in this style. The idea is to make government Request for Quote and Request for Proposal opportunities accessible to hundreds of thousands of companies, big and small alike.

RFQ and RFP bulletin boards can be considered "reverse electronic catalogs." Instead of sellers listing products, the buyers list them. Because of this, a credit check on the buyers -- the Citicorp concept -- would not apply in this circumstance.



Issues and Directions of Electronic Catalogs

This chapter reviews the characteristics of electronic business to business catalogs and the commercial conditions which encourage and discourage their use. A summary of key points are as follows:

- Electronic catalogs are often (perhaps, most often) not used for making purchases. They are frequently used for information gathering purposes only.
- Even when electronic catalogs are used to make purchases, sales and marketing personnel and other media (print advertising, for example) usually have interfaced with the buyer prior to catalog use. Electronic catalogs are not a totally new way of selling products. They are an adjunct to existing sales and marketing procedures. They are often promoted as an extra service to customers.
- The infrastructure is in place for widespread use of electronic catalogs by the business community. Even the smallest businesses now have the minimum computing equipment required to access an electronic catalog. Also, the needed critical mass exists of electronic catalog service providers and technologies.
- Online databases and CD-ROM/floppy diskettes are the two alternative delivery modes for electronic catalogs. Each has compelling advantages for use. CD-ROM/floppy diskettes will continue to be a viable catalog medium through the nineties and will fall off in use, probably, only until bandwidth on telecommunications lines is very cheap.
- There are a few developments that could pose competitive threats to Citicorp's Credit Service concept for electronic catalogs.

In this chapter, all reference to "electronic catalogs" should denote *business-to-business* electronic catalogs even if it is not explicitly stated.

A

The Rationale for Electronic Catalogs

1. Catalog Function

Catalogs (paper and electronic) are generally thought to be tools for shopping/procurement with the emphasis on giving the catalog user close to "perfect information" (in a classic economic sense) on product selection, prices and features with which to compare and make buying decisions. This is not necessarily the case with electronic catalogs.

There are many purposes which electronic catalogs fulfill. The following are a couple of examples of electronic catalogs from GE Information Services and INFO Enterprises (a Motorola company):

Catalog of . . .	Catalog Used for . . .
pharmaceuticals	tracking product price changes
books	price lookup
housewares	consumer shelf space management
other hard goods	warehouse storage space requirements
apparel	scanning data for POS systems
semiconductors	keeping up-to-date on rapidly changing technologies

At bottom, electronic catalogs serve two purposes:

- Disseminator of product information. At minimum, electronic catalogs name entities that are available for purchase (as in the case of UPC apparel catalogs).
- Buy-sell conduit. A platform by which customers can purchase products

These two purposes correspond to two kinds of catalog user:

- Information gatherer: where non-procurement personnel use the catalog. A design engineer or otherwise some "idea" person searches for suitable materials with which to build something. An MIS manager downloads product data to update internal point-of-sale systems.

- Buyer, where a procurement official uses the catalog to make a bulk purchases of materials.

Electronic catalogs have the potential to provide even more functionality than stated above. They can provide information services after purchases have been made. For example, catalogs may track the use of products and provide warranty and maintenance information (e.g. truck engine purchases/leasing). User interactions with electronic catalogs (product queries, actual purchases, etc.) can be automatically recorded and turned into database marketing information.

2. Benefits to Buyers

Benefits of electronic catalogs are twofold, paralleling the two functions of information gathering and procurement.

Information gathering benefits include:

- Coordination of electronic systems (such as UPC catalogs that coordinate POS systems at stores with the UPC codes on apparel manufacturers merchandise)
- CAD system interfacing (Sweets office furniture and construction materials)
- Most rapid dissemination of information on new or upgraded products (semiconductors)

Procurement benefits include:

- Locate the lowest prices (or optimal price/feature mix). A company purchasing paper for its direct mail campaign saved \$400,000 by using an electronic catalog that comprehensively listed all available papers of the mills in North America. Even the company's printer, RR Donnelley, did not have the ability to "know" all the sources.
- Product availability information. "Do you have the product now. How many. How soon can I receive it".

3. Benefits to Sellers

Benefits to those companies that list their products in electronic catalogs are:

- Another advertising medium and distribution channel.
- Source of market data. Queries and purchases are recorded for later analysis.

- Electronic catalogs are cheaper to produce and distribute than paper ones

B

The Electronic Catalog within the Marketing and Sales Function

Electronic catalogs are typically used in conjunction with traditional sales, marketing and advertising procedures. They are not used in isolation. Few sales are made by anonymous buyers. The buyer has usually been contacted by telemarketing or sales personnel and usually has some ongoing relationship with the purveyor of the catalog. Electronic catalogs are usually provided as an extra service to customers.

The remarks by the director of the National Association of Store Fixture Manufacturers is representative. The person estimates that approximately \$2 billion (or 33%) of the industry's total sales are generated by electronic catalogs. Still, catalogs are not entirely responsible for the sales. Sales still need salespeople, telemarketing and four-color advertising.

C

The Business Environment for Electronic Catalogs

1. Single- vs. Multi-Vendor Catalogs

As noted in chapter I, there are two kinds of business-to-business catalogs including those in electronic form. Single vendor catalogs list the products of one manufacturer/supplier only. Multi-vendor catalogs list the products of several (often hundreds of) suppliers.

Single vendor catalog makers have constructed electronic catalogs to assist their customers in buying their products. Usually the catalog service is tied into (and was preceded by) an EDI/electronic ordering system that the company implemented. The catalog is offered free of charge to customers. Sometimes a price discount is given to customer who order products electronically.

Multi-vendor catalogs are most often produced by distributors and less often by publishers (such as McGraw-Hill/Sweets, Cahners/EPIC). Several information technology vendors are offering electronic catalogs (usually in partnership with a distributor or trade association) Examples of the latter are Triad Systems Corporation, GE Information Services, Motorola, QRS

Quick Response Services. Lately, start-up companies that are neither distributor, publisher nor established information technology company are starting electronic catalog services. These companies bring a knowledge of vertical markets and information technology. Companies in this last category include Distribution Sciences Corporation, Automated Catalog Services and Vertical Technologies.

More information regarding the players of electronic catalogs is found in chapters V and VI.

2. Distribution Industries

Distribution industries are catalog intensive. Collectively, distribution is the commercial segment where electronic catalogs are emerging.

The majority of multi-vendor electronic catalog providers are distributors. Furthermore, distributors have the most at stake with electronic catalogs. Electronic catalogs are poised to vastly re-shape the distribution industries.

The business environment of today's distribution industry will determine how electronic catalogs will emerge.

The typical distribution industry, and distribution industries are almost identical across industries (electric motors, food, paper, etc.), consists of the manufacturer, the distributor (sometimes called merchant) and the customer. Sometimes distributors are owned by the manufacturer.

Nobody in the chain (manufacturer, distributor, customer) trusts the other. This has impeded the adoption of electronic data interchange and other electronic commerce systems.

Also, manufacturers and distributors are mainframe shops while customers are PC shops. This too has impeded the adoption of electronic systems. The two camps are looking for a common solution.

Distribution markets are typically regionalized. For example, in the paper industry, there are approximately 25-35 regional markets for paper. The San Francisco/Sacramento region would be one. The Los Angeles region another. San Diego a third, and so on. Every customer within a 150 mile radius uses a catalog. This has important consequences for electronic catalog design, especially in the necessary customization aspects as explained below.

Many forward thinking distributors are trying to transfer from being distributors to being marketers. That is, they don't want to own the warehouse nor the delivery trucks. They want to outsource/subcontract these services and just provide the information clearinghouse function. The problem is, these companies' cultures and information systems are set up for traditional distribution, not marketing. They are imbued with the distribution mentality and work practices. They don't think like nor have the necessary information on hand to be marketers.

To be good marketers, they need to know demographic and buying-patterns/trends information about their customers. A paper distributor, for example, needs to know about its customers (printing companies) how many presses each customer has, what kinds of stock and in what volumes they buy, what suppliers the customer buys from etc. Only with this kind of information can a company be an effective marketing company.

Today's distribution companies don't have this info. They only have inventory info and can take orders. They simply REACT to customers. Wal Mart is a good example of a distributor who knows its customers. They know their customers, know sales trends and then sell to the trends.

Transaction archive databases (such as Information Resources or AC Nielsen) are the flip side of catalogs. However, an electronic catalog can provide transaction information. For example, INFO Enterprises keeps a record of who looks at what products on the catalog. Catalogs are "pre buy" tools; transaction data bases are "post buy" tools.

3. Inhibitors of Electronic Catalogs

- Traditional industry players (excepting buyers) are not motivated to build electronic catalogs. Vendors are not motivated to build industry-wide, multi-vendor electronic catalogs. Trade associations may be possible.
- Price fixing and price-change signalling regulations may impede the creation of a centralized listing of all prices in a given industry. Trade associations are restricted in providing pricing information because of the risk of being a vehicle for price fixing and price-change signaling.
- Penetration of electronic capabilities not standardized. Parallels the way EDI grew up. Individual companies had their own proprietary systems. Then people started making industry standards. Same today with electronic catalogs. Manufacturers make their own. The result is that customers have to have a separate system for each proprietary catalog.

- Profit margins will fall due to electronic catalogs.
- Catalogs have different purposes: not always a procurement function. Hard to target users.

4. Accelerators of Electronic Catalogs

- Penetration of information technology fairly widespread in business and price/performance is now well within the affordability levels of the smallest businesses. Even the smallest businesses have the capability to access an electronic catalog either via online hook up, CD-ROM or floppy diskette (3-1/2 or 5-1/4 inch).
- EDI technology is used in all major industries.
- Federal government initiatives and Federal created electronic catalogs are spurring electronic catalog development in key industry segments (computer and office equipment, general merchandise, aerospace and technology industries).
- The economics of electronic catalog production and distribution is better than printed catalog production by at least one order of magnitude (and probably two). CD-ROM is cheaper to publish and distribute than paper based equivalents.
- The number of service companies and the technology are now robust enough to sustain an electronic catalog industry. Candidate entities that would offer electronic catalog services are many: dominant distributors, trade associations, information technology companies, and new entrepreneurs.

5. Financing Electronic Catalog Publication

A key issue is how electronic catalogs will come into existence. All manufacturers and some distributors (especially regional distributors) are not incented to publish electronic catalogs where all products of a given industry are listed with prices. Electronic catalogs, by giving buyers "perfect information," create a commodity marketplace with paper-thin profit margins.

Financing the electronic catalog service.

Three ways:

- buyers pay subscription fee
- sellers pay listing fee
- catalog provider gets percentage of every transaction

All the information that would go into a catalog is public domain information.

Manufacturers and distributors should look beyond simply competing on price. Yes, catalogs will probably erode margins. But the manufacturers and distributors should look to provide customers with other value added services.

D

Electronic Catalog Architecture and Technology

Today there are two ways of delivering an electronic catalog:

- Via online database. Catalog users "dial up" the database (with a computer equipped with modem and communications software).
- Via CD-ROM or floppy diskette (3-1/2 or 5-1/4 inch). These catalogs are delivered to the user's premises and installed in a computer system. Updates are made by sending another CD-ROM or diskette. Updates can be monthly or quarterly, depending on industry and/or rate of change of prices and product offerings.

Both delivery modes are equal in their capacity allow a user to create a purchase order and electronically send to the supplier. However, as noted below, online systems have the advantage of giving the buyer an immediate listing of available products to be ordered.

1. Advantages of online

- Online database catalogs can more effectively disseminate rapidly changing information on products (price changes, new product introductions, product availability for ordering, etc.) than CD-ROM/diskette catalogs.
- Online database catalogs have no size limitations where CD-ROM/diskettes do.

- Online databases could, in the future, offer better multimedia features than CD-ROM/diskette catalogs. Such features could include video clips showing product use, advertising, and others.

2. Advantages of CD-ROM/diskette

- CD-ROM/diskette is more familiar and technically less challenging to catalog users and purveyors than online catalogs. Buyers are more likely to use catalogs that are contained in their own systems and don't require dialing out to systems.
- CD-ROM/diskette catalogs are much less expensive to publish and distribute than online catalogs. Disseminating large "chunks" of product information is less expensive on CD-ROM/diskette than sending it over public telecommunication networks. In other words, downloading many megabytes of an electronic catalog from a online source many times per day could cost in the hundreds even thousands of dollars per month.

3. Future Developments

Electronic catalogs in the future will most likely adopt more and more "multimedia" features such as video, high-definition picture quality, full color capabilities, product specifications/parameters that can be manipulated by buyer-site software (such as CAD/CAM design specifications), extensive advertising, audio capabilities (in the advertisements, product explanations; music, other sounds), and others.

Some of these features may be furthered disseminated through output devices at the user site. For example, printing facilities may be invoked to create a "hard copy" of a catalog or portion thereof (perhaps just a single product description).

Multimedia electronic catalogs will require the advancement of a few key technologies. These technologies are:

- *Data compression.* Important to both the online and CD-ROM/diskette delivery modes. Some diskette catalog publishers can get 20,000 product listings on one 3-1/2 inch floppy disk. (Compression has already allowed more than an hour's worth of full-motion video to be stored in CD-ROM format.) Data compression, frame relay, asynchronous transfer mode (ATM) are leading compression techniques for getting more data down a telecommunications lines.

- *Bandwidth.* Important to online databases. Fiber optic cable (very high capacity) will not tie into every business establishment until the late 1990s or beyond. CD-ROM/diskette -based electronic catalogs will prove economical for many years (until line bandwidth is plentiful and cheap).
- *Client/server.* Impacts both delivery modes but initially online catalogs. Online catalogs could eventually take on a distributed format, perhaps with a central large database where manufacturers update their product listing and several client databases located in regional markets listing only those products available in the region. Alternatively, one database could list all information about products, whereas client catalogs would offer customized views of the information pertinent to the targeted catalog user (buyer users would see prices, information gatherer users would get detailed product specification information, etc.). Improved client/server techniques could eventually allow a merger between the online catalog and the CD-ROM/diskette catalog, with the former playing the server role and the latter playing the client role. (This seems to be happening with Triad's LaserCat catalog.)

E

Developments Related to Citicorp's Credit Service Concept

- A consortium of factors (Factors International) contracted with GE Information Services to build a system to clear factors. Could potentially lead to an online factoring service (where a factoring company guarantees payment on accounts receivable).
- VISA and MasterCard are offering procurement credit cards aimed specially at corporate buyers. Apparently, the cards are not being accepted as quickly as VISA and MasterCard expected.
- The Microcomputer Association is building a credit verification database for computer software and hardware resellers. Contact Jeffrey Masich at MicroAge Inc. for more information (602-968-3168). See Appendix A, interview #2.
- TRW, Equifax and Trans Union, already receiving collectively \$1.4 billion for credit verification services, could potentially offer competing services to Citicorp.



Catalog Industry Participants

This chapter identifies the companies involved in producing electronic catalogs. Because some electronic catalog publishers hail from the traditional print catalog industry, our survey includes the print industry participants as well as the strictly electronic.

Key points:

- The electronic catalog industry is very new, with many different kinds of companies (big and small) offering electronic catalogs. Companies producing electronic catalogs today have diverse backgrounds.
- Three basic kinds of companies make electronic catalogs: (1) the manufacturer/distributor who sells product via the electronic catalog (2) a traditional, print catalog producer or (3) a company that is new to the catalog industry but brings expertise in information technology.
- A handful of companies share the characteristics of all three kinds of companies.
- There is no standard way of doing business to create an electronic catalog (as there is, by comparison, in the print catalog industry). Some E-catalog producers are simply contractors who produce a catalog for a fee (similar to a printer that prints a paper catalog). Others produce the catalog and sell the use of the catalog to merchandise buyers.

A

Industry Overview

To better grasp the different companies involved in or likely to be involved in producing electronic catalogs, it is useful to distinguish three types of

companies. While these distinctions are arbitrary and not mutually exclusive, they give light as to the origins of the catalog industry participants today.

The three categories of companies that construct catalogs are:

- manufacturers and distributors that market their products through catalogs
- traditional catalog and direct marketing service providers
- non-traditional catalog providers

Manufacturers and distributors publish, send and/or make available catalogs to their customers. The catalogs contain a list of their products. Often, these manufacturers and distributors use the services and products of the traditional catalog service providers and the information technology providers.

Traditional catalog service providers, as their name suggests, have been around longer than the information technology providers. They are principally focused on producing print catalogs. As it is a \$25 billion business, they have their hands full. Some of the major players in this group are offering electronic services.

Non-traditional catalog providers have recently come on the scene. They are an assortment of large information technology/service providers (such as GE Information Services, Motorola) and start-up entrepreneurship (such as Vertical Technologies, Automated Catalog Services, and Distribution Sciences). They have the technology and expertise in putting catalog information in electronic form, but they generally don't understand the dynamics of catalog marketing (at least as well as the traditional players do).

Electronic catalog producers are to be found in all three groups. However, several companies are found belonging to all three groups (or at least two). These companies, more than the others, are the most advanced in providing electronic catalogs.

Companies in the overlap category are:

Digital Equipment Corporation
IBM
Motorola
Kodak
RR Donnelly
McGraw Hill

General Electric
Dun & Bradstreet

B

Manufacturers and Distributors that Market through Catalogs

1. Overview

This is the core group of electronic catalog purveyors.

Note: Because this report focuses exclusively on business-to-business catalogs, the consumer catalog purveyors are not listed. These include such groups as pure consumer catalog purveyors (Land's End, Spiegel, Lillian Vernon, Blair Corp., etc.), the catalog/retailers (such as J.C. Penney, Frederick's of Hollywood, Williams-Sonoma, and The Sharper Image), and television marketers (QVC Network, Home Shopping Network, National Media Corp., and Regal Communications Corp.).

Exhibit V-1 lists the key business-to-business catalog makers as ranked by Catalog Age. This group includes purveyors of both paper and electronic catalogs.

EXHIBIT V-1

Business-to-Business Catalog Purveyors (Paper and Electronic)

Company/Catalog	1992 cat. sales (\$millions)	Market Segment
DEC Direct	1800	computer products
Dell Computer	1610	computer products
Omega Scientific	500	industrial electronics
Deluxe Corp.	437	business supplies
Premier Industrial	436	industrial electronics
Everex Computer	436	computer products
IBM Direct	400	computer products
Viking Office Products	394	business supplies
Henry Schein	360	medical supplies
Quill Corp.	341	business supplies
Inmac	315	computer products
McCaster Carr	308	industrial electronics
MicroWarehouse	269	computer products
CompuAdd	262	computer products
AARP	261	pharmaceuticals
NEBS	234	business supplies
Borland International	190	computer products
Zeos International	184	computer products
Reliable Corp.	180	business supplies
Computer Discnt Warehouse	175	computer products
Apple Computer	173	computer products
WearGuard	162	business apparel
Global	152	computer products
PC Connection	150	computer products
Insight Distribution Network	140	computer products
Day-Timers	127	business supplies
Misco	125	computer products
Northgate Computer	124	computer products
Black Box	121	computer products
Lab Safety Supply	120	industrial supplies
NASCO International	120	farm supplies
America's Pharmacy	102	pharmaceuticals
Egghead	100	computer products
Northern Hydraulic	90	hardware
Moore Business Systems	85	business supplies
Executive Greetings	82	business supplies
Fastmicro	82	computer products
Safeguard Business	78	business supplies
MidWest Micro	77	computer products
InfoTel	77	computer products
Mac and Moore	70	computer products
Myron Manufacturing	70	business supplies
Central Purchasing	68	hardware
Kaiser & Kraft	66	industrial supplies
Scholastic Books	64	library supplies
Multiple Zones International	56	computer products
TOTAL	11,773	

2. Profiles of Electronic Catalog Purveyors that are Manufacturers or Distributors

The following are profiles of a catalog that is operated by a manufacturer or a distributor.

a. Wilco

Catalog Name: Wilco Electronic Catalog
Industry Segment/Products: locksmith supplies
Single/Multi-Vendor: multi
Format: floppy diskette
Ordering Capability: yes
Price: free to Wilco customers
Contact Name: --Bob Anderson
Telephone Number: --510-652-8522

Description: Wilco is a regional distributor of locksmith supplies based in Oakland, CA. Wilco contracted with Vertical Technologies (Concord, CA -- see accompanying profile) to produce a catalog on diskette of Wilco's product line. The electronic catalog lists 18,000 products (the most popular products of Wilco's 32,000+ product line). The diskette requires at least a 386 PC with DOS (but runs better on faster processors with Windows). The software allows the catalog user to browse products and to create a purchase order. The user prints the purchase order (PO) and then sends it by facsimile to Wilco. It is also possible for the user to send the PO directly from the PC via modem -- even in X12 formats. No customer has done this yet, however, as the catalog has been available only for two months (launched in October, 1993)

b. Brodart Co.

Catalog Name: Book Express Plus
Industry Segment/Products: books
Single/Multi-Vendor: multi
Format: online
Ordering Capability: yes
Price: \$50 per month minimum
Contact Name: --
Telephone Number: --

Description: A database system that provides technical support to libraries for acquisitions. The database contains references to over 1 million English-language monographs published by U.S. trade publishers. Users place orders for items online directly to Brodart and can perform fund accounting.

c. Digital Equipment Corporation

Catalog Name: DEC Direct

Industry Segment/Products: computer equipment and software

Single/Multi-Vendor: single

Format: online

Ordering Capability: yes

Price: free

Contact Name:

Telephone Number:

Description:

d. Baker & Taylor Books

Catalog Name: Baker & Taylor Books

Industry Segment/Products: books

Single/Multi-Vendor: multi

Format: CD-ROM, online

Ordering Capability: yes

Price: monthly subscription fees vary by options selected

Contact Name:

Telephone Number:

Description: Provides technical support to libraries for acquisitions. Contains about 800,000 citations, primarily to monographs in print or to be published in the US. Information on each item includes title, author, publisher, ISBN, Library of Congress Card Number, title status, binding, edition, volume, and list price. Users can place order online directly to Baker & Taylor, or to other vendors, and inquire about open orders, perform fund accounting, and generate a variety of management reports.

e. Airinc/American Transport Association

Catalog Name: Spec2000

Industry Segment/Products: airplane parts and supplies

Single/Multi-Vendor: multi

Format: online

Ordering Capability: yes

Price:

Contact Name:

Telephone Number:

Description: Allows airline companies to order replacement parts and fuel when needed at airport facilities. All major airlines (passenger, freight, and

couriers) of the world (about 80) use Spec2000. Major suppliers to airlines are listed.

f. AutoInfo

Catalog Name: Parts Locator Service

Industry Segment/Products: Used auto parts

Single/Multi-Vendor: multi

Format: online

Ordering Capability: yes

Price: ?

Contact Name: Jason Bacher

Telephone Number: 201-703-0500

Description: An online database of used auto parts for the automobile casualty insurance industry. Data are compiled from 400 auto parts salvage yards.

C

Traditional Catalog Service Providers

The traditional catalog industry is composed of:

- Printers, who manufacture the print catalogs
- Publishers (typically associated with trade magazines)
- Other Service Providers
 - Credit card and information processing service providers that are specialized for catalog order processing
 - Computer service providers related to catalog and direct marketing
 - Catalog software vendors
 - List brokers/providers, which covers a wide spectrum of companies and sources
 - Industry watchers, including the catalog trade press, industry associations, and research consultants

Leading companies within these five groups are listed below.

1. Catalog Printers

Printers are typically subcontracted by the retailer, distributor or manufacturer who wants the catalog published. Only the largest printers will actually publish (therefore maintaining copyright to) catalogs for their own purposes.

- RR Donnelley
- World Color Press
- American Signature
- Direct Media
- Noll Printing Company Inc.
- Perry Printing Corporation
- Ringier America
- Quad/Graphics
- Spencer Press
- Holladay-Tyler Incorporated

2. Publishers

These companies publish (and "own") catalogs. Usually these catalogs are financed through advertising (paid for by vendors) and per copy sales of the catalog.

McGraw-Hill
Cahners
D&B

Below are examples of electronic catalogs produced by traditional print publishers.

a. Sweets Electronic Publishing (a McGraw-Hill company)

Catalog Name: SweetSource

Industry Segment/Products: building and construction materials and accessories

Single/Multi-Vendor: multi

Format: CD-ROM

Ordering Capability: no; planned

Price: free to qualified professionals; \$200 per year

Contact Name: Julie Kienitz, Marketing Manager

Telephone Number: 616-732-5560

Description: A CD-ROM that contains the product catalogs of over 600 manufacturers of building and construction materials and accessories. Fifty (50) manufacturers are being added per update (occurring once per quarter). Contains scanned images of products, parametric drawings of products, and textual information. At this point, the CD-ROM Sweets catalog is only 1/3 the size of the printed Sweets catalog.

b. Thomas Publishing Company, Inc.

Catalog Name: Thomas New Industrial Products

Industry Segment/Products: industrial products

Single/Multi-Vendor: multi

Format: online

Ordering Capability: no

Price: per DIALOG fee structures

Contact Name: --

Telephone Number: --

Description: Contains descriptive and technical information on over 70,000 new industrial products and systems worldwide. Includes product and trade name, model numbers, SIC code, features, prices, features. Also includes manufacturer and dealer names, addresses, and telephone numbers.

c. Cahners Technical Information Service

Catalog Name: CAPS (Computer Aided Product Selection)

Industry Segment/Products: semiconductors

Single/Multi-Vendor: multi

Format: CD-ROM

Ordering Capability: no

Price: \$7,950

Contact Name: --

Telephone Number: --

Description: Contains specifications, identification data, and full-text images of manufacturers' data sheets for over 550,000 integrated circuits and semiconductors from about 500 manufacturers worldwide. Also provides specifications and identification data for over 100,000 discontinued and obsolete components. Includes part name, description, military and defense electronics supply center part numbers, price, and other information. Users can search by component function and technical characteristics and can retrieve and print manufacturers' data sheets for individual components.

3. Other Service Providers

Most of the service providers in this category are focused on the consumer segments of catalog and direct market marketing.

a. Credit Card and Information Processing Service Bureaus

These companies support the order processing function of catalog purveyors. They are more focused on the consumer catalog and consumer

direct market segment than the business to business. Business to business order processing is offered.

DMGT

Little & Company

b. Computer Service Providers

These companies process and massage list data for mailers.

CMS

Metromail (RR Donnelley & Sons)

c. Catalog Software Vendors

These companies cater directly to direct marketers, database marketers and catalog order takers. Their software creates databases of buyer names, assists in telephone or direct mail order taking and in mailings. These vendors are different from the software vendors in the information technology group mentioned below because they specialize in servicing the traditional (typically, direct mail -- paper) catalog mailers.

Sigma Corporation

Smith-Gardner & Associates

Nashbar/Associates, Inc.

d. List Brokers and Providers

This includes a lot of companies. There are specific list brokers. Also, any magazine publisher or professional/trade association will sell its subscriber or membership list.

of note:

BellSouth Advertising & Publishing Corp.

Direct Media

TCI TV List Management

Ziff-Davis List Services

e. Industry Watchers

Industry watchers are good sources of information on the players and dynamics of the catalog industry.

- Direct Marketing Association. Very large well organized and funded trade association of all companies (service providers as well as manufacturers/distributors) involved in the catalog and direct marketing business.
- Catalog Age. The bible of the catalog industry.
- SRDS. Standard Rate and Data Service lists all magazines, their circulation and their advertising rates. A major resource to direct marketers, list buyers.
- Information Authorities. A market consultancy for catalogers.
- Greyhouse Publishing, Lakeville, CT, Directory of Business-to-Business Publishing, 203-435-0868, Dick Gottlieb

D

Non-Traditional Electronic Catalog Service Providers

Several companies that are new to the catalog industry are offering catalog services. These companies may be established companies in other industries or start-up ventures.

These companies offer E-catalogs in two basic ways:

- (1) they simply help a distributor or manufacturer produce an electronic catalog which then the distributor/manufacturer distributes to its customers (Verical Technologies and Automated Catalog Services are examples of this kind of E-catalog service provider) or
- (2) they produce the catalog themselves and then re-sell it in their services (GE Information Services and Triad are examples of this kind).

Most of these companies that are entering the catalog industry are coming from the information technology industry. They bring an expertise in database technologies.

1. Information Technology Vendors

Information technology providers include software vendors (e.g. Microsoft, Computer Associates), hardware vendors (e.g. IBM, Apple Computer), and service providers (e.g. First Data Resources, Anderson Consulting, Pacific Bell). Several IT companies are either beginning to offer or are planning to offer electronic catalog services.

GE Information Services

QRS Quick Response Services (partly owned by IBM)
Sterling Software Inc.
Triad Data Systems
Motorola

a. Triad Systems Corporation

Catalog Name: LaserCat
Industry Segment/Products: auto parts
Single/Multi-Vendor: multi
Format: CD-ROM, online
Ordering Capability: yes
Price: \$4,450; monthly updates \$88
Contact Name: James Porter
Telephone Number:

Description: Contains information on over 1.6 million automotive parts and prices for domestic and foreign vehicles built since 1986. Includes part descriptions and numbers, manufacturer, prices, and related parts information. Software allows users to search by make, model and year of vehicle. Information is obtained from more than 2,000 catalogs from over 370 manufacturers.

b. INFO Enterprises (a Motorola Company)

Catalog Name: Engenius
Industry Segment/Products: Semiconductors and electronic components
Single/Multi-Vendor: multi
Format: online
Ordering Capability: not yet
Price: \$49/month for users; manufacturers pay for listing products
Contact Name:
Telephone Number:

Description: Semiconductor component manufacturers and distributors (including Motorola, Texas Instruments, Hitachi, and Amp) give INFO Enterprises their technical product "databooks" and IE puts them online. Design engineers, purchasing agents, other electronic vendors, and distributors use the service to check product specifications. One of the chief value adds that INFO Enterprises brings is being able to disseminate technical information on new and upgrade products faster than any either paper or CD-ROM distribution. In the electronics industry, where "time-to-market" is the rallying cry, speed is the essence. Product lives are frequently less than 12 months. INFO Enterprises can take out at least 12

weeks from the typical paper distribution cycle and 23 weeks from a CD-ROM cycle.

c. GE Information Services

Catalog Name: UPC*Express
Industry Segment/Products: apparel/retail
Single/Multi-Vendor: multi
Format: online
Ordering Capability: yes
Price:
Contact Name: Shelley Schwartz
Telephone Number: 602-298-0786

Description: Allows apparel and merchandise manufacturers (who code their merchandise with UPC "bar" codes) to electronically establish and maintain its codes for retailers to use. Not necessarily a procurement catalog.

d. QRS Quick Response Services

Catalog Name: QRS UPC Catalog
Industry Segment/Products: apparel/retail
Single/Multi-Vendor: multi
Format: online
Ordering Capability: yes
Price:
Contact Name:
Telephone Number:

Description: Identical in function to GE Information Services'.

2. Start-Up Electronic Catalog Service Entrepreneurs

These are new companies recently founded specifically to help companies (usually distributors or manufacturers) to create electronic catalogs.

Vertical Technologies (Concord, CA)
Automated Catalog Services (Wayne, PA)
Distribution Sciences Corporation (Hillsboro, OR)
Eclat (Walnut Creek, CA)

a. Automated Catalog Services

Catalog Name:

Industry Segment/Products: Food services equipment, other distributors

Single/Multi-Vendor: multi

Format: CD-ROM

Ordering Capability: yes

Price: \$600-\$1,600 per year; manufacturers pay \$1,100-\$25,000 to list products

Contact Name: Steven Katz

Telephone Number: 215-687-7500

Description: Lists food service equipment products (refrigerators, stoves, freezers, milkshake machines, etc.) of over 220 manufacturers. Currently, 500 dealers, distributors and chains subscribe.

b. Vertical Technologies

Catalog Name: (many names; determined by customer)

Industry Segment/Products: hardware, instrument, and electronics distributors; paper catalog publishers; industrial product manufacturers

Single/Multi-Vendor: multi

Format: Floppy Diskette

Ordering Capability: yes

Price: \$4,000-\$4,500 per production job; minimum run 500

Contact Name: Tom Gonzales, CEO

Telephone Number: 510-356-2800

Description: Vertical Technologies is a small privately held company. Tom (Sr) is CEO, his son, Tom (Jr) is president. Their strategy is to become the largest printer of electronic catalogs in the country. Vertical Technologies produces electronic catalogs either on diskettes or CD-ROM. It works with a single company as a customer. The company pays it for producing an electronic catalog (just as the company would pay it to print a paper catalog). Customers of vertical technologies are both manufacturers and distributors. Vertical Technologies converts a company's product catalog into electronic form. Its software is very good at data compression and gets a 200:1 ratio of compression. Its most popular format so far is diskettes, not CD-ROM. It has gotten 21,000 product descriptions with pictures and advertising on a single diskette. Diskettes are desired by most customers because the customers of the customers (the final users of the catalogs) do not have CD-ROM drives. The final users are not sophisticated computer users. They often will only have a small (-386 running DOS)

computer. A typical production job costs \$4,000 to \$4,500. Costs per disk range from \$8.50 to \$3.00 depending on production-run quantity. Minimum run is 500 copies. Some customers are producing 100,000 per month. See Appendix A, Interview 10 for more details.

3. Other Vendors

Other companies provide electronic catalog services. The following companies are leaders in CD-ROM mastering software.

Dataware
Knowledge Set



Conclusions and Recommendations

The use of an electronic catalog for business-to-business sales of merchandise (i.e. non consumer sales) is a very new sales channel. There are no standard ways yet established for using or of producing electronic catalogs. There are several uses of electronic catalogs (procurement, information gathering), several formats (diskette, CD-ROM, online), several varieties (manufacturer/single-vendor, distributor/multi-vendor), and several kinds of service provider who will make an electronic catalog (some coming from the traditional catalog/direct marketing industry, others coming from the information technology industry, and even others).

As with any newly emerging industry, the upside opportunity is to be an early entrant and capture dominant market share. The downside risk is to lose invested moneys because the market either fails to materialize or emerges in an unanticipated form.

Catalog producers today have not explicitly voiced a need for the credit guarantee service concept of Citicorp. However, several catalog producers -- especially the established information technology providers (see below) - expressed an interest in the concept and are willing to meet with Citicorp officials for further discussion.

While now ahead of its time, Citicorp's service concept will most likely come into some need. Electronic catalog usage will come to pervade many industries by the end of the decade. Citicorp should proceed in finding partners.

The following are recommendations concerning partner selection.

- Citicorp should meet with catalog producers who are willing to discuss the concept (see below and appendix A). This will give Citicorp

officials a more immediate insight into the dynamics of electronic catalogs.

- Because the industry is so new, perhaps the most stable partners are the manufacturers and distributors that sell their products through electronic catalogs. However, offering a credit service to these companies may be the equivalent of offering factoring services.
- The traditional catalog producers may not yet have a need for Citicorp's proposed service. The ones who are venturing into the electronic catalog area (R.R. Donnelley, McGraw-Hill/Sweets) are generally producing catalogs without ordering capabilities.
- The new players to the catalog industry offer Citicorp the highest risk/reward. Within this group, the best partners will be the established information technology service providers such as GE Information Services, Motorola, Sterling Software, QRS Quick Response Services, IBM/Advantis, and Triad Systems Corporation.
- The start up ventures playing the electronic catalog market are generally selling electronic catalog mastering services. Nevertheless, these companies may be worth meeting with as they could provide valuable insight.



Unstructured Interviews

The following are transcripts of interviews of electronic catalog providers.

1

Gene Ballew

Gene Ballew
Systems Integrator/Consultant,
IS Systems for Distribution Industry
November 5, 1993

tel: 816-635-4897
Karney, Missouri

"People in distribution industries are catalog intensive. Every distribution industry is ripe for electronic catalogs."

He sees a big opportunity for electronic catalogs in the distribution industries. He is working with a partner in Portland, Oregon to develop a catalog in the paper distribution industry. He is working with a paper distributor today (owned by a paper manufacturer) to develop an EDI system with the distributors customers. He is also working with a small bank (\$50 million in assets) in making an electronic catalog for them. He is also working with a distributor/manufacturer of electric motors (for garage door openers, whirlpool/spa motors, etc.) in making an electronic catalog.

Here are his points about electronic catalogs:

The business case for electronic catalogs:

Customers have no central source to turn to for information about all products. There is a tremendous amount of cross-referential information on products that needs to be organized and made available. Catalogs will provide this. Also, information about products (including price but other information as well such as technical info, availability, new products, etc.) changes so fast that paper catalogs get out of date very soon and are not viable.

Electronic catalogs must address the two phases of catalog use: product information gathering and procurement.

General Issues of Today's distribution environment:

The typical distribution industry, and distribution industries are almost identical across industries (electric motors, food, paper, etc.), consists of the manufacturer, the distributor (sometimes called merchant) and the customer. Sometimes distributors are owned by the manufacturer.

Nobody in the chain (manufacturer, distributor, customer) trusts the other. This has impeded the adoption of electronic data interchange and other electronic commerce systems.

Also, manufacturers and distributors are mainframe shops while customers are PC shops. This too has impeded the adoption of electronic systems. The two camps are looking for a common solution.

Distribution markets are typically regionalized. For example, in the paper industry, there are approximately 25-35 regional markets for paper. The San Francisco/Sacramento region would be one. The Los Angeles region another. San Diego a third, and so on. Every customer within a 150 mile radius uses a catalog. This has important consequences for electronic catalog design, especially in the necessary customization aspects as explained below.

Many forward thinking distributors are trying to transfer from being distributors to being marketers. That is, they don't want to own the warehouse nor the delivery trucks. They want to outsource/subcontract these services and just provide the information clearinghouse function. The problem is, these companies' cultures and information systems are set up for traditional distribution, not marketing. They are imbued with

the distribution mentality and work practices. They don't think like nor have the necessary information on hand to be marketers. To be good marketers, they need to know demographic and buying-patterns/trends information about their customers. A paper distributor, for example, needs to know about its customers (printing companies) how many presses each customer has, what kinds of stock and in what volumes they buy, what suppliers the customer buys from etc. Only with this kind of information can a company be an effective marketing company. Today's distribution companies don't have this info. They only have inventory info and can take orders. They simply REACT to customers. Wal Mart is a good example of a distributor who knows its customers. They know their customers, know sales trends and then sell to the trends. [[Transaction databases are the flip side of catalogs. However, a catalog can provide transaction information. For example, INFO Enterprises keeps a record of who looks at what products on the catalog. Catalogs are "pre buy" tools; transaction data bases are "post buy" tools.]]

Business Issues of Electronic Catalogs

Sooner or later, there will be electronic catalogs for all kinds of industries. Products will be traded in a fair value (commodity) manner. Perhaps access to the catalogs will be via cable television with hundreds of channels.

Catalogs serve two purposes: (1) a way of distributing information to customers (2) a conduit by which customers can purchase products. These two purposes correspond to two distinct phases; (1) product information gathering, where a design engineer or otherwise some "idea" person is looking for suitable materials with which to build a product and (2) procurement, where a procurement official must make a bulk purchase of materials and try to get the best price breaks. Users of catalogs, therefore, are two different people with different interests and different kinds of authority.

A key issue is how electronic catalogs will come into existence. Neither distributor nor manufacturer is incited to make an industry wide catalog (where all products from all manufacturers are listed).

Customers should subscribe to the catalog. Pay an access fee.

Note: all the information that would go into a catalog is public domain information.

Manufacturers and distributors should look beyond simply competing on price. Yes, catalogs will probably erode margins. But the manufacturers and distributors should look to provide customers with other value added services.

Catalog Architecture

There should be two levels to a catalog:

- (1) General product information level without prices. This lists all products, their features, manufacturers, identification codes (bar codes, UPC codes, etc.), availability, etc.
- (2) Pricing level. This level could be "customized" for particular regions. First of all, there could be suggested prices and then negotiated "street prices" that are specific to each manufacturer-customer relationship.

Customization will take place on a regional level. Only those manufacturers that serve a particular region would be listed on the catalog. In addition, pricing would be customized as explained above.

There would be two types of catalogs: a single universal catalog where all manufacturers list all their products and then regional catalogs that list products available only in the given region. The regional databases would be updated by the universal database.

The catalogs would work in conjunction (in a client/server mode) with the systems at the customer site. Today, there are three major alternatives/possibilities: (1) the customer just has some kind of interface software (could be EDI translation software) that allows it access to the regional database where it can download info (2) the customer not only downloads the electronic information but directs it to paper document printers on-site (such as Xerox Docutech machines that can print 300-400 page documents and 300 copies each -- good for small catalog distribution; for catalogs of 800 pages or more and that require 3,000 copies or more, you need to go to a web press) (3) CD-ROM distribution of catalogs (which he thinks is good for software distribution).

Catalog updates come from manufacturers. Customers update their internal systems as needed. The updates should just send down the changed information: not the whole data set in the catalog.

Architecture must use client/server design. One big problem today that is inhibiting the proliferation of electronic systems between distributors and their customers is that the distributors operate in monolithic mainframe environments and the customers are PC environments. The two environments represent two fundamentally different ways of doing business. Mainframes have to go away.

Manufacturers should be the originators of product identification numbers and codes (not the distributors).

Industries Adopting Electronic Catalogs

Paper industry

Graphics and Printing Industries

Aviation

Marine hardware (including boat brokerage)

Electric motor

Jeffrey Masich
VP Channel Finance
MicroAge, Inc.
Phoenix, AZ
602-968-3168

October 22, 1993

Chairman of the Credit Interchange Subcommittee,
Computing Technology Industry Association (formerly
Association of Business Computer Distributors)

His subcommittee is putting together a database of credit histories of resellers and other customers of computer distributors. The purpose is for the distributor to be able to give credit to a customer very quickly (within six hours).

The database is "still in the formation stage." Masich expects to make a press announcement sometime in late November. The committee is also meeting, in Chicago, sometime in November to discuss the progress. No documentation is available to the outside public, according to Masich.

Masich was very resistant to the idea of a bank. He said that he didn't think there was a match because (1) he thought the bank would slow down the ability for credit to be approved (all the documentation would have to be passed through the bank) and (2) that already there are slim margins in the industry and nobody will want to pay an extra fee to the bank for credit services.

He said that the bank is welcome to contact the manufacturers directly and see if they are interested. The list of members of the CTIA members may or may not be available. Masich said I should call Bill West, Controller of CTIA, in Chicago. 708-268-1818 ex 311.

Masich said that his company, MicroAge as well as most distributors, already deal with banks and financial institutions to deal with credit and factoring issues. When MicroAge sells to a customer, it invoices a bank which in turn invoices the customer or customer's bank. Masich said, "We deal with all of the banks of the manufacturers (?? I am pretty sure he said manufacturers) such as ITT, Nation's Bank, ATT Capital and IBM Credit."

Shelley Schwartz, UPC Product Manager, GEIS
602-298-0786

9/23/93

GEIS has 200 vendors and 35 others (retailers, distributors, label manufacturers) on their UPC catalog. Starting up catalogs in other areas:

shoe and sport talk

similar to Pubnet

shoe retailers use PC software to log onto shoe catalog; after selecting what they want to order, the system creates a purchase order (in X12 format) and sends it to GEIS' EDI*Express all in the same session

GEIS has several hundred retailers for this

NWDA (pharmaceutical)

working with a hardgoods association

microcomputer industry (manufacturers, distributors, retailers)

will get into grocery sometime (GEIS big in grocery in Canada)

Competition

IRI

DRI

company specific catalogs (Motorola, Anderson Windows (bldg materials))

Triad

Financial services

Shelley is absolutely interested in the Citicorp concept

already GEIS is talking with the Factors Chain International (250 factors worldwide that need EDI services among themselves to clear factors)

QRS's revenue: Shelley guesses that they make 1-1/2 to 2 million, maybe three on catalog alone; the rest is the royalty from Advantis and revenue from leases back to the company

Shelley thinks catalogs are the way of the future and expects to see rapid growth. Catalogs are growing in functionality from being simply a naming tool to a complete information tool; more fields are being added to the catalogs (information regarding warranty, pricing terms, trade names, packaging information, and more)

Catalog Industries:

retail

apparel

shoes

grocery

books

microcomputers

auto parts
hardware/building materials
engineering building materials (for engineering companies)
electronics components, semiconductors
CAP (cahners?)
pipeline transport

Interview 11-12-93

GEIS' catalogs as of today:

- UPC (informational)
- shoe and sport talk (order capability)
- Pubnet (order capability)
- NWDA (informational)
- Australian Record Industry
- Australian books
- National Houseware Manufacturers Assoc. (informational)
- Motor Equipment Manufacturers Assoc

Individual Manufacturers/Distributors

- McKesson
- Anderson Windows
- GE Aircraft

The question is: "will people make catalogs on their own or as a group?" This parallels the way EDI grew up. Individual companies had their own proprietary systems. Then started making industry standards. Same today with catalogs. First , manufacturers make their own. The result is that customers have to have a separate system for each proprietary catalog.

Today's electronic catalogs each have their own unique purposes:

pharmaceuticals	price changes
books	prices
housewares	consumer shelf space management
other hard goods	warehouse storage space requirements
apparel	information scanning at the POS

Principal
Ulin & Holland, Inc.
mergers and acquisitions specialists
tel: 617-261-6360
176 Federal St.
Boston, MA 02110

November 9, 1993

He didn't know how big the b-to-b catalog industry was. He recommended that I contact:

Mike Petsky (formerly with DMA now an independent consultant)

Information Authorities
716-334-7800 (upstage NY)

Maxwell Srogy (does research in catalog industry; publishes a sourcebook)

312-819-1890 (chicago)
719-633-5556 (colorado)

DMA's Statistical Fact Book

He said the b-to-b market lags the consumer market by 3-5 years.

He said that he would be interested in working with a bank partner. His company is working on two b-to-b projects right now. He recommended a man in Boston who is considered to be a guru in building catalog/direct mail businesses. This man has put his own money into to some new catalog ventures. He could be a good candidate for Citicorp.

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Julie Kienitz

Julie Kienitz
Marketing Manager
Sweets Electronic Publishing
Wholly-Owned Subsidiary of McGraw-Hill
Grand Rapids, Michigan
tel: 616-732-5560

Company Background

Sweets Electronic Publishing was founded in 1978 as Computer Aided Planning. It produced software that assisted companies in contract furniture specification (specifying furniture for office environments). In 1987, the company launched its first CD-ROM product, a catalog of the office furniture from 40 different manufacturers. In 1990 McGraw-Hill acquired CAP and renamed the company, Sweets Electronic Publishing. McGraw-Hill assigned the group with placing the McGraw Hill Sweets Catalog into CD-ROM format. The Sweets Catalog is a 16 volume book set that contains the catalogs and product literature to almost 1800 vendors of building and construction materials. The Sweets Catalog is an industry standard reference guide for architects, engineers, building contractors, facilities managers and designers.

Products

Sweets Electronic Publishing has two products to date:

Furniture Catalog: contains the catalogs of 40 furniture manufacturers. Includes product specifications. Information can be downloaded into CAD systems for space planning purposes.

SweetSource: The Sweets Catalog in CD-ROM format. The product was launched in April 1993 and by this fall has its third disc out. It currently has about 1/3 of the material of the printed Sweets Catalog. Contains the products of over 600 manufacturers. 50 manufacturers are being added per disc release (which occurs about once per quarter). SweetSource contains (1) scanned images of products (2) CAD parametric drawings of the products and (3) textual information. The CD-ROM catalog is given free to people who qualify to receive the Sweets printed catalog. To others, Sweets charges \$200 per year for a subscription. There is no ordering capability.

Markets

Sweets Electronic Publishing sells to two markets:
furniture
building and construction materials

Strategy

Sweets has a 700 person advisory council made up of its catalog users. The council give feedback on to the usability of the catalog and voices needs. One need that is voiced and which Sweets has plans to fulfill is the ability for users to download specification information (that can be loaded into design software).

Ordering capability (via EDI) will come eventually, according to Kienitz. The first priority is to build the catalog with all manufacturers.

Competitors

Eclat (Concord, CA) distributes furniture on floppy discs

Cahners Publishing its EPIC product builds CD-ROM catalogs for typically individual companies. Sweets wants to set the standard for industry-wide (multi-vendor) electronic catalogs.

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Paul Miller

Paul Miller
Sr. News Editor
Catalog Age
Stamford, CT

203-358-9900 x253

11-10-93

"The market for business-to-business catalogs is impossible to quantify."

Every major corporation (such as IBM, etc.) has a catalog of its products. Should their revenues (IBM's \$60 billion) be counted as b-to-b catalog revenues?

There are no statistics on the b-to-b catalog mkt.

Miller's hunch is that the b-to-b market (if you could quantify it) would be bigger than the consumer catalog market.

DMA's estimate of \$52 billion in catalog sales includes b-to-b. Also, its estimate of 10,000 catalog titles also includes b-to-b.

Examples:

Automated Catalog Services, Inc. (Wayne, PA), Steven Katz,
President
food service equipment business

DEC Direct (Digital Equipment Corporation)

INFO Enterprises

10-15-93

Service

INFO Enterprises constructs online databases for specific industry groups. The databases are optimized for providing vast amounts of text, graphical and multimedia information in an structured, easily-accessed format. INFO Enterprises will take text, graphic and other collateral files from companies (who would normally print, bind and publish these in paper book formats) and put it in an electronic structured form. These files are used by a community of people typically as product reference material.

INFO Enterprises is serving the semiconductor and electronic component industries with a service called Engenius. Semiconductor component manufacturers and distributors (including Motorola, Texas Instruments, Hitachi, and Amp) give INFO Enterprises their technical product "databooks" and IE puts them online. Design engineers, purchasing agents, other electronic vendors, and distributors use the service to check product specifications. One of the chief value adds that INFO Enterprises brings is being able to disseminate technical information on new and upgrade products faster than any either paper or CD-ROM distribution. In the electronics industry, where "time-to-market" is the rallying cry, speed is the essence. Product lives are frequently less than 12 months. INFO

Enterprises can take out at least 12 weeks from the typical paper distribution cycle and 23 weeks from a CD-ROM cycle.

INFO Enterprises is also launching a service for the legal community. It is putting litigation documentation online so that parties involved in litigation can all have easy up to the minute access to material.

Potential Market

In the semiconductor industry:

Users: 750,000 to 1 million design engineers. In four years wants 50% at least to be users. Wants 90% to know about.

Vendors: about 100 major manufacturers, including semiconductors, connectors, passives, models/simulations

Coming Features

E-mail so that design engineers can talk with supplier

Online fulfillment so that the design engineer can request more information (gets it immediately printed out)

Multimedia where the user downloads software (for simulation) or online training with full motion video

Online advertising with measurement built in (advertisers will be informed of how many engineers read their ad)

Ordering capability. Is coming but it is not a high priority because the design engineer usually does not have purchasing authority. Can only buy samples. Otherwise it is the procurement officer that makes big purchases.

Revenue Streams

(1) Manufacturer. Per item charge and by number of pages plus charge based on the extent that INFO Enterprises has to massage the data. We give the manufacturer usage statistics including market share of inquiries for a given product category.

(2) Subscribers. Three ways of charging.

- Individual -- flat fee up to 10 hrs per month, up to 100 pages printed
- Group -- 20 or more engineers of a single company; graduated scale
- Distribution fee -- for specific software items; a fee of the total price; will come

Access

dial up
dedicated line
we will have backbone carriers
no special software (UNIX, PC, MAC)

Other Markets

We are not restricted to the electrical engineering market. We have expertise in financial services, medical and aeronautics.

Response to Citicorp idea

We would entertain the conversation with a bank

We have no specific plans for factoring but it is within the capability of the system.

We have people who come from the banking area.

Mike Petsky
President
Information Authorities
16 Winterberry Loop
West Henrietta, NY 14586
tel: 716-334-7800

11-15-93

B-to-B Market Size

The business-to-business catalog market size is \$60 billion, in terms of volume of product sales through mail order catalogs.

Of the \$60 billion, about half is "true" catalog sales, the other half is sales from individual manufacturers who happen to have a catalog. There are about 6,000 titles.

This compares to the \$50-\$60 billion in catalog sales on the consumer side with 10,000 titles.

There is a third segment, fund raising.

Total market size for catalog/direct marketing is \$200 billion, he says.

Segments

So the true b-to-b catalog market is about \$30 billion. There are about 6,000 b-to-b catalogs as listed in Grehouse Publishing's (Lakeville, CT -- 203-435-0868, contact Dick Gottlieb) *Directory of Business-to-Business Catalogs*.

This \$30 billion is broken out into three segments of nearly equal sizes:

Office Supplies

Accounts for \$10 billion.

Includes computer equipment and software, stationery and office supplies, and office furniture. About \$5 billion is for the computer equipment and software.

Business services

Accounts for \$10-\$12 billion.

Includes communication and information services (studies, seminars, books) freight courier and transportation services, subscription services, mailing lists

Industrial Products

\$10-\$12 billion

Includes all kinds of industrial products, material handling machinery, scientific instruments, medical supplies, etc. Leaders in this segment are Omega Scientific, Black Box, AT&T, Emerson Electric, Premier Industrial Corp., W.W. Grainger

This last segment includes a lot of single-vendor catalog marketers.

Trends in Catalog Industry

Large manufacturers and distributors are spinning off their mail order operations. W.W. Grainger (a nationwide distributor of industrial components based in Skokie, IL) bought Lab Safety Supply (a maker of safety products) in 1992.

List brokers are using EDI to electronically order lists from other brokers.

Directory services may be a big need in the list and catalog industry.

Issues of Electronic Catalogs

distributing catalogs in an electronic form must meet the following requirements:

- Recipients of the catalogs must have the appropriate computer equipment and expertise to operate the catalogs.
- The product set of the catalog must be sufficiently huge and complex where electronic searching is truly a value added feature.

Instances of electronic catalogs

W.W. Grainger has a CD-ROM catalog of its products. It sends out approximately 5,000 copies per year. It does not have ordering capability yet.

the automotive area is a big area for electronic CD-ROM catalogs

Tom Gonzales
CEO
Vertical Technologies, Inc.
1355 Willow Way
Suite 110
Concord, CA 94520

tel: 510-356-2800
fax: 510-356-2988

Background

Vertical Technologies is a small privately held company. Tom (Sr) is CEO, his son, Tom (Jr) is president. Their strategy is to become the largest printer of electronic catalogs in the country. We want to become the RR Donnelley of electronic catalogs, says Tom Sr.

Service Offering

Vertical Technologies produces electronic catalogs either on diskettes or CD-ROM. It works with a single company as a customer. The company pays it for producing an electronic catalog (just as the company would pay it to print a paper catalog). Customers of vertical technologies are both manufacturers and distributors. Vertical Technologies, therefore, make both single- and multi-vendor catalogs.

Vertical Technologies converts a company's product catalog into electronic form. Its software is very good at data compression and gets a 200:1 ratio of compression. Its most popular format so far is diskettes, not CD-ROM. It has gotten 21,000 product descriptions with pictures and advertising on a single diskette. Diskettes are desired by most customers because the customers of of the customers (the final users of the catalogs) do not have CD-ROM drives. The final users are not sophisticated computer users. They often will only have a small (-386 running DOS) computer.

A typical production job costs \$4,000 to \$4,500. Costs per disk range from \$8.50 to \$3.00 depending on production-run quantity. Minimum run is 500 copies. Some customers are producing 100,000 per month. There is no ongoing maintenance fees.

The software that vertical technologies creates the catalog in is "home brewed." It does not use off the shelf database software such as FoxPro, DBase, Oracle, etc.

While most customers do not stress an ordering capability, Vertical Technologies has a component that allows people to order off of the catalog.

Orders can be created in four ways:

1. make a facsimile and send via fax (the software interfaces with Delrina's WinFaxPro software. An order can be faxed off without leaving the catalog)
2. make an X12 formatted file and send (the software allows for some form of EDI translation; probably not as sophisticated as off the shelf EDI translation software)
3. print out the order on paper and mail it
4. create an ascii file of the order and send in E-mail or put it into procurement system

The catalog interface runs under Windows.

Allows for extensive cross referencing. Users are able to call up all products of a given category.

Catalog uses UPC codes where available. Proprietary manufacturer product numbers as well.

Catalogs are used for informational and procurement purposes. Gonzales reports that his customers make this distinction. Some catalogs are more for information only. Customers are not interested in the ordering component.

There is an ordering component to the software. It gives the catalog user the ability to create a purchase order. It also archives purchase orders.

Distribution Desktop. A product that is being developed. Allows a catalog user to search on several catalogs simultaneously. The idea being that several manufacturers will have their own individual catalogs. Distribution Desktop will allow a buyer to search on all catalogs (makes single-vendor catalogs into a virtual multi-vendor catalog).

Customers

Wilco Supply (distributor)

A distributor of locksmith supplies (key blanks, Schlage locks, Master Locks, etc.) Customers of Wilco (locksmiths) have abandoned the Wilco EDI ordering system in favor of ordering off of the electronic catalog.

Howard W. Sams (catalog publisher)

This company produces paper catalogs in many different industry segments including plumbing and heating supplies,

paper supplies. It re-sells (under its own label) Vertical Technologies' electronic catalogs. It has VT produce electronic versions of the catalogs it publishes.

Gerald-General Instruments (manufacturer)

Makes converter boxes for cable TV systems and other CATV equipment/components.

Wilkerson Manufacturing (manufacturer)

Makes air filters for clean air environments (hospitals). The company has 700 distributors around the world. It sends electronic catalogs to these distributors. The distributors, in turn, send the catalogs to end users/buyers.

Hamilton Avnet (distributor)

Big distributor of electronic and electrical components. Is in talks with Vertical Technologies.

Competition

Sees no competition. Claims that its software distinguishes it from the rest.

Market Opportunity

Gonzales has no idea how big the market is for this product. He says it staggers the imagination. He says he is getting customers from all niches. And all customers want exclusivity on the product.

He foresees how the product can become a front end to an EDI system. One customer, Wilco, found that users abandoned their EDI systems in favor of ordering off of the catalog.

Gonzales sees how other capabilities could be added to the catalog to enhance ordering including inventory checks (to see if product is available) and he mentioned explicitly credit checks.

Distribution Sciences Corporation
Hillsboro, OR
503-693-1791

11-15-93

The big potential in electronic catalogs is in software distribution. Retail stores and dealers for software will be eliminated in 2 years. CD-ROM distribution of software will allow people to test drive software before they buy it. They will have 5 free times to boot the software. Then the system locks them out if they don't buy it. There will be CD-ROM libraries for niche markets.

SoftBank (Monterey, CA), Merisel (largest software distributor and descendent of SoftSell), Phoenix Technologies, and Alexander Lords (telephone order taker service bureau) are launching a software catalog. IBM too has launched a software catalog on CD-ROM.

Automatic software registration is becoming a real good source of market data. People install software. AT the end, a routine asks the person demographic data. THEN the system prepares a report which includes the demographic data as well as a list of all the components of the system. The report is either printed out and sent back to the manufacturer by the user. OR it is automatically transmitted by modem.

Electronic Catalogs

airplane parts

Boeing's CD-ROM catalog of its airplane parts. Replaces a 40 lb book. The project was originally a joint venture with Knowledge Set (Mountain View, CA software co), British Airways, SunStrand and Boeing. Eventually Boeing just did it by itself. Has ordering capability. Frank Cessna at Boeing is the contact.

paper

Weiner's company (Distribution Sciences Corporation) is launching a CD-ROM catalog for purchasers of paper. The company collects data made public by all the paper mills in the country. The catalog can allow paper buyers to save thousands

to hundreds of thousands of dollars. For example, the catalog saved \$400,000 for Central Point Software in their recent catalog mailing. There are so many variables when buying paper that a buyer cannot review all sources in the traditional way of calling and checking with paper suppliers. Some of the variables are opacity, brightness, availability, acidity/alkalinity, etc. The selection is always a suboptimal choice due to lack of information/time to check all sources. Even RR Donnelley (the printer in the Central Point catalog) couldn't find the best supply of paper.

Paper mills are wanting to get rid of the middle man (distributor).

Weiner's company is selling the catalog directly to printers, ad agencies, and distributors (people who buy paper). At first it was going to try to sell to the whole industry but it saw that this was too time consuming and risky. The plan now is to get some real customers, then go back to the industry as a whole and make the offer.

Distribution Sciences has a venture capital company from San Diego that is financing it.

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Bob Williams

12/2/93

Bob Williams
VP Operations
Wilco Supply
PO Box 3047
Oakland, CA 94609

tel: 510-652-8522

Company Background

Wilco is a small regional distributor of locksmith supplies (door locks, keys and key blanks, door closures, building security equipment). It was founded in 1951 by Bob Williams' father who continues to run the company. It has approximately 6,500 active customers, 60% of whom are locksmiths. The rest are

institutional buyers, schools, hospitals, hotels. Most of its business is in Northern California. In the last ten years it has gone into Southern California and the Pacific Northwest. It just recently started carrying some auto security products and is distributing these nationally. Wilco has 12 field sales representatives.

Forerunners to the Electronic Catalog

Because its competitors were doing so, Wilco launched an electronic order-entry system in the early eighties. It continues operating today. The system, referred to as "soos" (for stock and order system) is a proprietary system, not standardized EDI. It is made by the turnkey systems vendor Pertec, now owned by Scan Optics. Qualified customers use a computer terminal to dial up the soos system. It allows the customer to check Wilco's available inventory and to place an order.

The system is not used much, according to Mr. Williams. "We had lots of inquiries, but few orders." Even by giving discounts on orders (ranging from 2 to 5 percent off of the total purchase order amount) customers didn't use it.

Furthermore, the soos system is expensive and difficult to maintain. Wilco is letting the system fade out. Also, Wilco is migrating its company MIS system into a UNIX environment (and has contracted with Data Systems and Management, a VAR in the distribution industry segment).

The EDI Alternative

Mr. Williams has considered implementing an EDI system and has even received quotes from such EDI vendors as St. Paul Software. However, he sees EDI as perhaps overkill.

It may be sophisticated and elegant but his customers are not computer literate. His customers would not be comfortable with EDI. Even Mr. Williams is leary of the complexities he sees with EDI. "I've learned that unless you're dragged into [EDI], don't go."

He sees the electronic catalog as a much better solution.

The Electronic Catalog Solution

Wilco contracted with Vertical Technologies to produce a catalog on diskette of Wilco's product line. The electronic catalog lists 18,000 products (the most popular products of Wilco's 32,000+ product line). The diskette runs on a -386 PC with DOS. The software allows the catalog user to browse products and to create a purchase order. The user prints the PO and then sends it by facsimile to Wilco. Alternatively, the catalog allows the user to send the PO directly from the PC if the PC has a modem -- even in X12 formats. No customer yet has sent it by EDI. But the catalog has been available only for two months (launched in October, 1993)

"The orders come in very clean," according to Mr. Williams. "We're very happy." The orders are clean partly as a result of another feature in the catalog software. Some of the products Wilco distributes have product identification numbers from the manufacturer. These numbers are different than Wilco's own ID numbers. The catalog software cross-references these numbers. The purchase orders that arrive at Wilco use Wilco identification numbers.

The electronic catalogs, only two months out, are a big hit with customers. "We have people clamoring for the electronic catalog," says Mr. Williams. Orders are coming back from it.

Better than EDI

He doesn't mind that he isn't receiving the benefit of EDI -- eliminating the re-keying of data. Orders come in quickly. Customers are happy.

"When I give a catalog to a guy he feels he is blessed with something free," says Mr. Williams. Conversely, he is not being threatened with complicated, techno-wizardry of EDI. Locksmiths are not computer oriented. They have a simple PC and a facsimile machine. This is the infrastructure and mindset you have to deal with.

"Electronic catalogs keep business on a delight level," according to Mr. Williams. This is entirely different from the EDI situation where "you are getting wagged by the dog."

Nevertheless, Mr. Williams can see the day when EDI is incorporated into the software's catalog. It could be kept invisible from the customer.

Desired Enhancements

Mr. Williams would like an "open purchase" order capability. The bane of the distribution industry, he says, is the add-on order. The customer thinks of another item that it needs. It asks the distributor to include it with the next shipment. If the catalog would simply accumulate all the orders for a day then dump it at the end of the day, it would be better.

The Future of Distribution

The distributor is becoming more and more an information resource than a holder of inventory. You still make your money on holding the inventory, he says, but "if you can't give the right answer to a customer query, you don't get the order."

With just in time and quick response, distributors are increasingly taking up the inventory. They are being used as the retailer's warehouse -- and must pay the inventory carrying costs. Consequently, retailers are calling up all day long. They order more frequently in smaller quantities. This way the retailer doesn't have to hold the inventory.

Systems like the electronic catalog and EDI will certainly bring more efficiency to the distribution business. The whole objective is to work smarter and make fewer errors, says Mr. Williams. The vendors of locks are still old fashioned. Wilco isn't doing EDI with them yet. But the day is coming.



Questionnaire for Association Interviews

Hello, may I please speak with executive director/public relations director/technology director of the [organization's name]?

Hello, my name is _____ and I am calling from INPUT. We are conducting a market survey of trade associations to determine if various industries are constructing or planning to construct electronic catalogs for the products within their industry. If you will take just a few minutes, we will gladly send to you an executive overview of our findings in this study.

1. In your industry, how important are catalogs (that are printed on paper and made available to buyers) as a sales medium?

- ☐ very important
- ☐ somewhat important
- ☐ not important

2a. How much sales volume in your industry is sold through catalogs?

- ☐ 75-100%
- ☐ 50-74%
- ☐ 25-49%
- ☐ less than 25%

2b. What is the total dollar volume of sales of your industry? _____

3. How many catalogs would you estimate are published and distributed in your industry?

4a. Are there electronic versions of product catalogs in your industry including catalogs available online or via a CD-ROM medium?

___ yes [proceed to question #5]

___ no [proceed to question #4b]

4b. Are there plans to make electronic catalog(s)

___ yes; when? _____

by whom? _____

___ no; why not: _____

5. What are the chief obstacles in creating an electronic catalog in your industry?

6. Please explain how product listings are maintained and updated?

[END SURVEY HERE, if "no" to question 4a]

7. How is the electronic catalog delivered?

- ___ online
- ___ CD-ROM
- ___ other, please explain _____

8. Who originates and operates electronic catalogs in your industry? (check all boxes and write names of companies that apply)

Company Type	Originates	Operates	Name of Company
Manufacturers			
Distributors			
the trade association			[one being interviewed]
a large printing company			
an information technology company			
other (please explain)			

7. What is the volume of business generated by the electronic catalog?

8. On a scale of 1-5 (five being "very successful"), how would you rate the success of the catalog?

_____ any comments? _____

11. Please explain how catalog users use the catalog?

12. Does the catalog have an electronic ordering capability built into it?

13. Who pays for the catalog service? (check all that apply)

☐ users pay a subscription fee

☐ vendors pay a listing fee

☐ catalog provider gets a percentage of every transaction

☐ other, please explain



Data from Association Interviews

INPUT contacted trade associations that represented distributors and asked questions regarding the use of catalogs (paper and electronic). See appendix B for the questionnaire used in surveying these associations.

The following table summarizes the results from the association interviews. The data are the recorded responses of the association representatives. The column showing the estimated percent of merchandise sold through catalogs includes electronic and paper catalogs. In only a few cases did respondents offer an estimate of how much merchandise was sold through electronic catalogs. These sparse comments are not shown here.

The data is listed by (1) those trade associations that claimed their industry used electronic catalogs and (2) the size of the industry (from biggest to smallest).

Association	Estimated Sales Vol of Indstry (\$billions)	Percent Sold Thru Catalogs	Number of Catalogs	Are there Electronic Catalogs?
Nat'l Assn of Wholesale & Indep Dist	1800	50-74	1500	yes
Comp. & Business Equip. Mfrs. Assoc.	270	25-79	26	yes
Health Indstry Dist Association	200	75-100	400	yes
N A W G A	130	75-100		yes
Amer Soc. of Appraisers Mach&Equip	120	<25	500	yes
Automotive Warehouse Dist Assn	100	50-74	1000	yes
National Auto Parts Association	50	99	300	yes
Autobody Supply & Equip Mfrs Council	50	25-49	1000	yes
Motor Equip Mfr. Assoc	50	25-49	1200	yes

Nat'l Sporting Goods Assoc	29	75-100		yes
Steel Service Center Institute	24	75	350	yes
Specialty Equipment Manufacturers	14	75	2,500	yes
Nat'l Electrical Dist Assoc	12	50	500	yes
Nat'l Outerwear & Sportswear Assoc	10	50-74	800	yes
Specialty Equipment Market	9	N/A		yes
Nat'l. Tooling & Machine Assoc	8	25-49		yes
Performance Warehouse Assoc	7.7	80		yes
Nat'l. Assoc. of Store Fixture Mfrs	6	50-74	100	yes
Assoc for Manufacturing Tech	5	25-49	300	yes
Architectural Woodwork Institute	3	-25		yes
Metal Finishing Suppliers Assoc	3			yes
Nat'l Assoc of Sporting Goods Whlrs	2		50	yes
Nat'l Wholesale Furniture Assn	1.25	50-74	200,000	yes
Wood Machinery Mfrs Assoc	1	50-74	130	yes
Specialty Tools & Fasteners Dist	1	25-49		yes
Irrigation Assn	1		250	yes
Farm Equip. Wholesale Association	1	75-100	200	yes
Material Handling Equip Dist.	0.8	50-74	300	yes
Nat'l Appliance Parts Suppliers Assoc	0.5	50-74	60	yes
Assoc. of Automotive Aftermarket Dist		-25		yes
AirConditioning & Refrigeration Whlrs		25	2500	yes
Nat'l Truck Equip Assoc		<25		yes
Art Dealers Association				yes
National Locksmith Suppliers Assoc		75-100	100	yes
Nat'l Assn of Recording Merchandisers		50-74		yes
Metal Building Mfrs. Association				yes
Food Marketing. Institute	183	<25	1	no
American Apparel Mfrs Assoc	120	<25		no
Nat'l. Electrical Mfrs. Association	100	N/A	550	no
Nat'l Assoc of Container Dist	100	<25	800	no
Nat'l Association of Chemical Dist	100	50-74	500	no
Independent Medical Dist. Assn	75	-25		no
Nat'l Food Dist Association	50	50-74	900	no
Gen'l Merchandise Dist Council	30	<25		no
Nat'l Lawn & Garden Dist Association	20	25-49	300	no
Association Equip. Dist	20	50-74	800	no
Assn of Home Appliance Mfrs	18	50-74	183	no
American Gear Mfg. Association	15	50-74	150	no
Int. Sanitary Supply Association	14	75-100		no
Assoc Of Steel Distributors	10	<25	100	no
National Sash & Door Jobber Association	10	50-74	500	no
Aerospace Industries Association	10	<25	100	no
Nat'l Spa & Pool Assoc	8	<25		no

American Supply Association	8	50-74	110	no
Forging Industry Assoc	6	<25	1	no
American Machine Tool Dist	5	<25		no
Pet Industry Dist. Association	3	75-100	75	no
Music Dist. Association	3	75-100	1000	no
Nat'l. Marine Distribution Assn	2	50-74	100	no
American Fishing, Tackle Mfr. Assoc.	2	50-74	500	no
Industrial Truck Assoc	2	50-74	70	no
Resistance Welder Mfrs Assn	2	<25	80	no
Industrial Diamond Assoc of America	2	50-74	70	no
Outdoor Power Equip. Dist. Assn	1	-25		no
American Apparel Contracts Assoc	1		340	no
Int Magnesium Assoc	1	<25	60	no
Aluminum Association	1	25-49	130	no
American Machine Tool Dist. Assoc	1	<25	50	no
Industrial Distribution Assn	1	<25		no
Nat'l Beer Wholesalers Association	1	50-74	300	no
American Fabricating Inst. of Tech	1	<25	1200	no
Nat'l Assn of Hose & Accessories Dist	0.8	25-49	300	no
Bearing Specialist Assoc	0.7	<25	60	no
American Cutlery Mfr Association	0.7	25-49	30	no
Bicycle Wholesale Dist. Association	0.6	50-74	150	no
Costing Independent Suppliers	0.5	<25	60	no
Nat'l Association of Meat Purveyors	0.5	<25	300	no
American Traffic Safety Svcs. Assn	0.3	24-49	100	no
Nat'l Assoc Of Arch Metal Mfrs		100		no
Chemical Sources Assoc		25-49	100	no
American Brush Mfrs. Associaton				no
American Clock Association		25-49	100	no
Assoc of Motor Vehicle Mfr		<25		no
Nat'l Assoc of Die Makers&Die Cutters		25-49	370	no
Nat'l Independent Food Dist. Assn		<25		no
Nat'l Commerical Refrig. Sales Assn		50	100	no
Nat'l. Assoc. of Metal Nameplate Mfrs		25%		no
Nat'l Assn of Flour Distributors		<25	12	no
Nat'l. Screw Machine Prdts. Assoc.				no
Nat'l. Van Conversion Assoc.		-25	4	no
Woodworking Machinery Dist				no
Nat'l Assoc. Of Machinery Dealers		<25		no
Conveyor Equip Mfr. Association				no
Diamond Wheel Mfrs.				no
National Frozen Food Association		25-49	4	no
Detroit Tooling Association				no
Gas Appliance Mfrs Assn		<25		no

Machinery Dealers Nat'l Association		75-100	500	no
Independent Performers Association		<25	40	no
Biscuit & Crackers Dist. Association		<25		no
Jewelry Industry. Dist. Association				



INPUT®

INTERNATIONAL IT INTELLIGENCE SERVICES

Clients make informed decisions more quickly and economically by using INPUT's services. Since 1974, information technology (IT) users and vendors throughout the world have relied on INPUT for data, research, objective analysis and insightful opinions to prepare their plans, market assessments and business directions, particularly in computer software and services.

Contact us today to learn how your company can use INPUT's knowledge and experience to grow and profit in the revolutionary IT world of the 1990s.

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 - Worldwide and country data
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(Over 100 in-depth reports a year)

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DATABASES

- Software and Services Market Forecasts
- Software and Services Vendors
- U.S. Federal Government
 - Procurement Plans (PAR)
 - Forecasts
 - Awards (FAIT)
- Commercial Application LEADS

CUSTOM PROJECTS

For Vendors—analyze:

- Market strategies and tactics
- Product/service opportunities
- Customer satisfaction levels
- Competitive positioning
- Acquisition targets

For Buyers—evaluate:

- Specific vendor capabilities
- Outsourcing options
- Systems plans
- Peer position

OTHER SERVICES

Presentations to user groups, planning meetings, etc.

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Newsletters

INPUT WORLDWIDE

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Niederkleen
Germany
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Fax +49 (0) 6447-7327

London
17 Hill Street
London W1X 7FB
England
Tel. +44 (0) 71 493-9335
Fax +44 (0) 71 629-0179

New York
400 Frank W. Burr Blvd.
Teaneck, NJ 07666
U.S.A.
Tel. 1 (201) 801-0050
Fax 1 (201) 801-0441

Paris
24, avenue du Recteur
Poincaré
75016 Paris
France
Tel. +33 (1) 46 47 65 65
Fax +33 (1) 46 47 69 50

San Francisco
1881 Landings Drive
Mountain View
CA 94043-0848
U.S.A.
Tel. 1 (415) 961-3300
Fax 1 (415) 961-3966

Tokyo
Saida Building, 4-6,
Kanda Sakuma-cho
Chiyoda-ku, Tokyo 101
Japan
Tel. +81 3 3864-0531
Fax +81 3 3864-4114

Washington, D.C.
1953 Gallows Road
Suite 560
Vienna, VA 22182
U.S.A.
Tel. 1 (703) 847-6870
Fax 1 (703) 847-6872

Acctg. ONLY

Inv. Comp.	By:	Date:	Client #	Order #	Inv. #	Multi-Invoicing of
ORIGINATOR (Signature) <u>John A. Greco</u> DATE <u>5/6/93</u>						APPROVALS
Company <u>KPMB</u>			CA Tax Rate			VP Sales/Res.
Name Mr./Ms. <u>Armando Greco</u>			CT Tax 8%			Date
Position <u>Senior Manager</u>			Salutation			Controller
Address <u>Fax 39.2.6764.3603</u>			State			Date
			Zip			
City <u>Milan</u>			Country <u>Italy</u>			
Province			Fax			
Phone <u>39.2.6764.3611</u>			Tlx			

Special instructions for invoicing, progress billing, or delayed payments, etc.

Bill on delivery, 5/18

Contract Year Beg. _____ End _____	Invoice Type <input type="checkbox"/> Fulfillment Only <input type="checkbox"/> W/Order (OR) <input type="checkbox"/> Monthly (MO) <input type="checkbox"/> Quarterly (QT) <input type="checkbox"/> Pending	Employee # Sold by: <u>JAY</u> _____ _____ _____	Employee # Commission to: _____ _____ _____
<input checked="" type="checkbox"/> New Order (N1) <input type="checkbox"/> Prior Yr (N3) <input type="checkbox"/> Renewal (N2) <input type="checkbox"/> Cancel		_____ _____ _____	_____ _____ _____

PO# _____ INPUT Contract ☐ Letter ☒ Verbal ☐
 Attach all authorizing documents to white (contract) copy.

Company	Province
Name Mr./Ms.	Salutation
Position	State
Address	Zip
	Country
City	Phone

• Subscription (SB)	• Copies (CP)	• Merger/Acq. (ME)
• Custom (YC/ZC/KC)VC	• Consult/Present (PR)	• Exec Overview (EO)
• Multiclient (MC)	• Newsletter (NL)	• Conf/Seminar (CN)
• Reports (RP)	• Reimbursed Costs (EX)	

[illegible]

Fulfillment to be completed in: ☐ Corporate ☐ London ☐ Virginia ☐ France ☐ Other

• White - Contract • Green - Fulfillment • Yellow - Invoice • Pink - Originator • Goldenrod - Sales Manager

M&S180 12/92

INPUT



MEMORANDUM

DATE: May 6, 1993
TO: Armando Greco, KPMG Milan
FROM: John McGann, INPUT

VIA FAX: 39-2-6764-3603

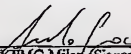
We understand that your objective is to obtain information about 10 to 15 major banks in Europe.

The information sought on a best efforts basis includes an average of the percentages of IT budgets dedicated to hardware maintenance, the average utilization of third party hardware maintenance, and indications to the extent possible on the equipment involved in third party maintenance such as central system hardware resources and peripheral resources in branches. If actual budget figures for maintenance or use of third party maintenance can be obtained, that would be desirable. Trends in the use of third party maintenance should also be sought.

This information is desired in less than two weeks (before May 18), but preliminary information is desired by May 14.

The fee will be \$2,000 (U.S.) for this activity, payable upon delivery of the information.

Please indicate your agreement with this arrangement by signing and returning this via fax.



For KPMG Milan (Signature)

ARMANDO GRECO

Name (Please type or print)

SENIOR MANAGER

Title

Date

May 6, 1993

INPUT



INPUT[®]

Atrium at Glenpointe, 400 Frank W. Burr Blvd., Teaneck, NJ 07666 (201) 801-0050
Fax (201) 801-0441

FAX TRANSMITTAL FORM

Date: May 13, 1993
To: Name: Mr. Armando Greco
Tel./Location: _____
Co.: KPMG Milan
Fax No: 39-2-6764-3603
From: John McGann
Subject: Preliminary Information

Confidential: Y / N
Urgent: Y / N

Page: 1 of 2
File: Chron
Contact
Other:



Report on the Use of Hardware Maintenance and
Third Party Maintenance by Leading European Banks

for KPMG, Milan

Preliminary Information as Requested

Information	Average expenditures for hardware maintenance for a group of leading European banks.
	Use of third party maintenance by leading European banks.
Source	Survey of leading banks in Europe recently conducted by INPUT, together with follow up contacts to verify or supply further information.

Information Obtained

- Average Hardware Maintenance Expenditure

Survey results show that the average hardware maintenance expenditure for a group of 25 leading European banks was 1.35% for central sites.

The range of hardware maintenance costs falls in general between 1 and 1.5%.

- Third Party Maintenance

Third party maintenance can be used in several ways.

12% or less of the central sites of the group of 25 leading European banks use third party maintenance.

About 25% of the users of PCs or workstations use third party maintenance.

- Third party vendors have subcontracts to support the hardware maintenance of some hardware vendors, particularly for equipment that the hardware vendor does not manufacture, but their workers appear to be part of the staff of the hardware vendor.

Information on equipment involved in hardware maintenance, trends in third party maintenance and other topics will follow.



MEMORANDUM

DATE: May 14, 1993
TO: Armando Greco, KPMG Milan
FROM: John McGarr, INPUT
VIA FAX: 39-2-6764-3603



*** ACTIVITY REPORT ***

TRANSMISSION OK

TX/RX NO.	3763
CONNECTION TEL	01139267643603
CONNECTION ID	KPMG PEAT CONSUL
START TIME	05/13 16:15
USAGE TIME	01'00
PAGES	2
RESULT	OK



PROJECT WORK STATEMENT

TITLE Hardware Maintenance in leading Banks

DISTRIBUTION

CLIENT KPMG, Milan

CONTRACT FILE

CONTRACT: ATTACHED ☐ TO FOLLOW ☐ LETTER ☐ VERBAL ☐

LIBRARY FILE

PROJECT LEADER J McGinn PROJECT CODE YKP

NEW JERSEY

DATE STARTED 5/10 PLANNED COMPLETION DATE 5/18

INPUT LTD.

LEVEL OF EFFORT (Professional Man Days) 125

Originator

TOTAL CONTRACT VALUE: \$ or £ 2,000

REVENUE DISTRIBUTION (% or \$) INPUT US 60% INPUT LTD 40%

REIMBURSABLE EXPENSES: NO ☒

YES ☐

SHEILA (Y&Z on

BINDER COPY

EXP. BUDGET ☐ TO COVER: TRAV: ☐

TELE: ☐

RPT. PREP.: ☐

OTHER: ☐

Date Typed

BILLING SCHEDULE DESCRIPTION Bill on completion

PROJECT DESCRIPTION Estimate percentage of IT budget devoted to hardware maintenance and use of third party maintenance at a group of selected banks. Fax results in report form to KPMG/Milan.

INDICATE TYPE OF WORK: REPORT ☒ PRESENTATION ☐

THANK YOU PACKAGE: YES ☐ NO ☒

ACCOUNTING USE ONLY: ENTERED ON CURRENT PROJECT LIST ☐



PROJECT SCHEDULE (Q2-1993)

*Corporate Week **Ending Date †Working Days; () UK

INPUT*

Activity	Name	Act. Days	Factor	ESDs	APRIL				MAY				JUNE				
					14* 4/9** 5(4)†	15 4/16 5(4)	16 4/23 5	17 4/30 5	18 5/7 5(4)	19 5/14 5	20 5/21 5	21 5/28 5	22 6/4 4	23 6/11 5	24 6/18 5	25 6/25 5	26 7/2 5
Preliminary Proj. Spec.	JM	.2	1	.2						1.2							
Client Poll																	
Project Spec./Authorization																	
Quest. Design/Test/QC.																	
Quest. Approval/Review Meeting																	
User Interviews:																	
# On-Site ()																	
# Telephone ()																	
Vendor Interviews:																	
# On-Site ()																	
# Telephone ()																	
Secondary Research	ML	.5	1	.5						1.5							
TOTAL PLAN SR.																	
TOTAL PLAN RA																	
TOTAL PLAN ESDs				.7						.7							
TOTAL SPENT SR.																	
TOTAL SPENT RA																	

Proj. Code: YKR Proj. Name: Hardware Maintenance in Loading Bunkers Prepared by: J McGarry
 Proj. Manager: J McGarry Date: 5/6



PROJECT SCHEDULE (Q2-1993)

*Corporate Week **Ending Date †Working Days; () UK

INPUT*

continued

continued

Activity	Name	Act. Days	Factor	ESDs	APRIL				MAY				JUNE				
					14* 4/9** 5(4)†	15 4/16 5(4)	16 4/23 5	17 4/30 5	18 5/7 5(4)	19 5/14 5	20 5/21 5	21 5/28 5	22 6/4 4	23 6/11 5	24 6/18 5	25 6/25 5	26 7/2 5
Data Tab./Analysis																	
Exhibit Development																	
Forecasting																	
Vendor Profiles # ()																	
Write Report. # of Pages (4)	JM	15	1	15							7.5						
Abstract/Press Release/ Brochure INPUT/Output Article																	
Production/QC.																	
Presentation Prep/Delivery																	
"Thank-You" Package																	
Project Wrap-up																	
TOTAL PLAN SR.		15									7.5						
TOTAL PLAN RA																	
TOTAL PLAN ESDs																	
TOTAL SPENT SR.																	
TOTAL SPENT RA																	

Proj. Code: YKP Proj. Name: Hardware Maintenance in Loading Banks Prepared by: J Mc Gann
 Proj. Manager: J Mc Gann Date: 5/6

PLG 300002 8/92 (R)



**Report on the Use of Hardware Maintenance
and Third Party Maintenance Services
for KPMG, Milan**

Draft Report

**Information
Desired**

Average expenditures for hardware maintenance as a percentage of IT budgets for a group of leading European banks.

Average use of third party maintenance by leading European banks.

Trends in the use of third party maintenance

Illustrations of the budget allocation percentages for hardware maintenance for leading banks. Banks may allow a generalized statement of data about them to be mentioned if their names are not used.

Information is sought on a best efforts basis

Source

Survey of leading banks in Europe recently conducted by INPUT, together with follow up contacts to verify or supply further information.



Information Obtained

I Average Hardware Maintenance Expenditure

Survey results show that the average hardware maintenance expenditure for a group of 25 leading European banks was 1.35% of IT budgets for central sites.

The range of hardware maintenance costs falls in general between 1 and 1.5% of IT budgets for central sites.

II Equipment Covered by Hardware Maintenance Contracts

This includes contracts that cover information technology equipment at central sites, branch sites or both branch and central sites.

There are also contracts that cover office equipment such as copiers and Fax units together with information technology equipment at branch or all sites as well as contracts that supply other services together with equipment maintenance. These contracts are more common in the U.S. where they include such services as operational aid, help desk assistance, network management and disaster recovery aid.

Over 75% of the large banks contacted had more than one vendor involved in information technology (IT) hardware maintenance. Where multiple vendors are utilized, they can include IT equipment vendors, third party maintenance firms, dealers or distributors, and software and services vendors. The first two groups supply the major portion of hardware maintenance at large banks.



III Third Party Maintenance

Third party maintenance can be used in several ways.

12% or less of the central sites of the group of 25 leading European banks use third party maintenance.

About 25% of the users of PCs or workstations use third party maintenance.

Third party vendors have subcontracts to support the hardware maintenance of some hardware vendors, particularly for equipment that the hardware vendor does not manufacture, but their workers appear to be part of the staff of the hardware vendor.

As noted above, third party maintenance is found more often in branch locations than at central sites (about twice as often) since the large banks tend to rely on equipment manufacturers for maintenance at the central sites. However, the use of third party maintenance is expected to increase at central locations.

IV Trends in IT Equipment Maintenance

Third party maintenance is increasing at large European banks just as it is increasing at U.S. banks.

Third party vendors tend to encroach at large banks by obtaining maintenance contracts for PCs and/or terminals at branches. Then, they tend to seek contracts to maintain distributed equipment such as IBM AS/400s. Finally, they will seek contracts for all equipment at a branch and central site equipment.

Third party vendors are also introducing additional types of service and support that are packaged together with hardware services for banking clients such as those mentioned in section II. This trend will continue.

In the U.S., the use of third party service to large banks increased by about 5% between 1991 and 1992. Cost savings was given as the major reason although quality of service, response time and access to spare parts are also given as reasons for using third party firms. Cost savings from using a third party vendor increased between 1991 and 1992.



V. Illustrative Material

One of the largest European banks states that about 1.2 or 1.25% of its IT budget is devoted to hardware maintenance.

The bank reports that a hardware manufacturer handles maintenance for the central site and a vendor of PCs, other IT equipment and services has a contract covering maintenance of IT and other equipment at branch offices. They thought of the second vendor as a type of third party maintenance vendor.

Another large bank has a major hardware manufacturer maintaining IT equipment at the central site and many branches. Other vendors, both third party vendors and a dealer who also performs third party maintenance are also utilized. This bank reports that its hardware maintenance costs are about 1.3% of its IT budget.

A group of larger banks who use one vendor for most or all of their maintenance report an average of 1.45% of their IT budget is devoted to maintenance.



MEMORANDUM

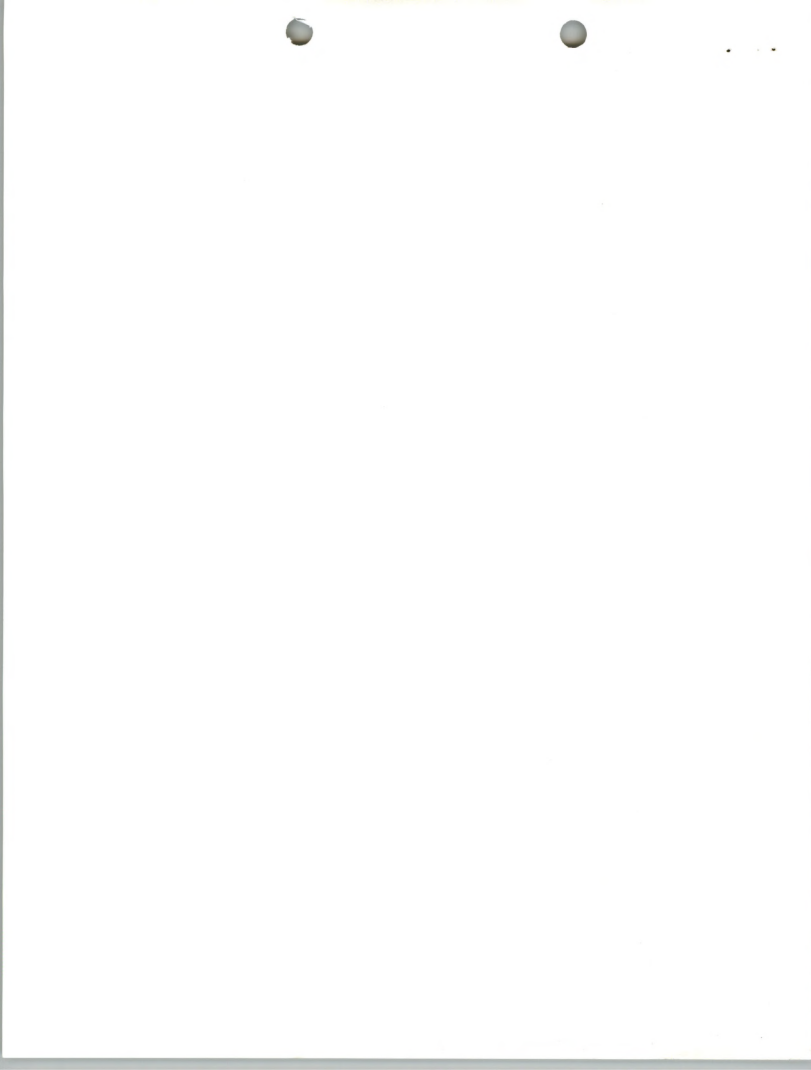
DATE: May 20, 1993
TO: Robert Meade, KPMG Peat Marwick
FROM: John McGann, INPUT

VIA FAX: 201-307-7443

The draft copy of report is attached.

Please contact us after receipt and review.

INPUT



MEMORANDUM

DATE: May 18, 1993
TO: Armando Greco, KPMG Milan
FROM: John McGann, INPUT

VIA FAX: 39-2-6764-3603

Five Pages Total

The draft copy of report is attached.

Please contact us after receipt and review.

INPUT

